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Merry Christmas!

GREETINGS AND GOOD WISHES to every member and friend of the National Organization for Public Health Nursing!

It does not seem possible that another year of service is already subject to review and that another year full of hope and expectation is waiting on the threshold. From all signs it is to be one full of challenge to our profession.

The splendid national health program calls for greater leadership, more thorough preparation, and more fruitful service on the part of all who labor in the health field. And that in large measure means public health nurses.

May the happiness and friendliness of the season possess us abundantly, and may we go forth with vigor and good will to meet a rededicated New Year.

The National Organization has faith that we will meet the challenge enthusiastically. And we can have zest and courage because at all times our N.O.P.H.N. stands steadfastly behind us.

"God bless us, every one."

GRACE ROSS, *President*
National Organization for Public Health Nursing

FROM FIFTEEN TO FORTY-FIVE



In spite of all the gains that have been made in the control of tuberculosis it continues to be the highest cause of death between the ages of 15 and 45—the period when men and women are in the prime of their usefulness to society. It is the outstanding chronic disease of industrial workers, occurring at the age of their greatest productivity. Vigilance must not be relaxed in our efforts to control this disease and to rout it from one of its last strongholds, the industrial wage-earning group.

One of the most encouraging signs at present is the development of industrial health services which are concerned with the health of the individual worker and the conditions under which he works. Enlightened management is finding that the health of the workers is closely related to higher productivity and reduction in lost time.

The nurse in industry and in the community plays a vital part in maintaining the health of the worker. No one is more cognizant of the need for adequate resources for the prevention and care of illness.

We are sure that the annual Christmas Seal sale, through which national, state, and local tuberculosis associations are supported in their program for the prevention and treatment of this devastating disease, will receive the support of public health nurses throughout the country.

IMPROVING OUR SKILL IN PNEUMONIA CARE

"OUR EXPERIENCE has led us to believe that nurses are fearful of being called upon to assist with serum therapy because they lack the knowledge essential to intelligent assistance." This statement by Emma H. MacChesney, co-author of the current articles on pneumonia nursing, describes the reaction of most of us to new and untried things. It is for this reason that we are publishing a series of three articles on the subject of pneumonia care.

Pneumonia comes close to the head of the list of our most important problems in disease control today. It is one of the three highest causes of death in the United States and Canada. It is the chief cause of death of infants under two years of age, with the exception of premature birth. It takes a high toll from workers in certain industries, as Mr. J. J. Bloomfield shows in his article on page 718. The greatest hazard from this disease occurs during the winter months which we are now approaching.

The nursing care of pneumonia—particularly during serum therapy—is not a simple and casual procedure. It requires skill, precision, accuracy, and judgment. The State of New York is recognizing the need for skilled nursing care in pneumonia by extending the program of public health nurses to include service during the acute stage of the disease and especially during the administration of serum by the physician.

A leader in public health nursing recently said that probably our greatest need is to improve our knowledge in regard to the clinical material which we need for our work. The nurse on the job has a right to expect that her professional magazines will give her the current information she needs to keep up to date in her field. We hope that nurses who are called upon to assist with serum therapy in the home will find the article on this subject a manual of information which will enable them to approach the treatment with confidence and to give their patients the highest quality of professional care. P. P.

The Serum Treatment of Pneumonia

What is the nurse's part in the serum treatment of pneumococcus pneumonia, and what knowledge should she have in order to give the patient intelligent care?

By EDWARD S. ROGERS, M.D., and EMMA H. MacCHESNEY, R.N.

THE INTRODUCTION of specific serum treatment of pneumococcus pneumonia has evoked among nurses a renewed interest in this disease. During the winter of 1937-1938 such interest was reflected in a widespread demand by the nurses of New York State for information with respect to this new treatment and its related nursing functions. In consequence instruction was furnished, by demonstration and discussion, to approximately 2000 nurses at regional meetings held throughout the state.

In view of the expressed desire on the part of many nurses to learn more about this procedure and because the nurse can perform a real service to both physician and patient by her effective aid, it seems appropriate to outline here some of the essential facts regarding serum therapy and the services a nurse should be prepared to render in connection with it.

The question and answer method has been used in presenting this material in order to offer the ABC's of the subject in a form that will lend itself to staff education programs and also serve as reference for the nurses who may be called on to assist in this treatment.

Much of the material presented has been handled quite broadly since it deals with the scientific and medical facts underlying the use of serum, the detail and application of which are the responsibility of the physician, but which the nurse should be familiar with. The discussion of each question is in conformity with the recommendations of the New York State Medical Society and the Advisory Committee on Pneumonia Control of the State Department of Health.

GENERAL BACKGROUND MATERIAL

Pneumococcus pneumonia—etiology and statistical significance

Since type specific serum therapy can be applied only to the treatment of pneumonias caused by the pneumococcus, some general information regarding this microörganism and its incidence should be interesting.

Q. What is the pneumococcus?

A. The pneumococcus is a microorganism. In its most typical form it consists of a pair of oval-shaped cells, the slightly flattened ends of which lie close together. Each cell body is surrounded by a capsule containing complex sugars. This capsule forms a protective armor against the destructive forces of the host. The nose and throat are the usual portals of entry for the pneumococcus. When the body defenses are lowered the organism invades and infects the lung tissue, giving rise to the inflammatory process called "pneumonia."

Q. What is meant by "types" of pneumonia?

A. There are more than thirty types, or species, of the pneumococcus which may give rise to pneumonia. Their cell bodies are all alike but their essential difference is in the chemical composition of their capsules, their size and their

virulence—much in the same way that the various species of the dog family all have a fundamental similarity of structure but differ from each other in their size, disposition, and the character of their coats.

Q. What percent of lobar pneumonia in the general population is caused by the pneumococcus?

A. Approximately 95 percent. Type I appears to be uniformly the most prevalent. This type, together with Types II, V, VII and VIII, comprises a large portion of the lobar pneumonias encountered in this country. The distribution of types may vary quite widely from year to year in a given area.

Q. What percent of bronchopneumonia in the general population is caused by the pneumococcus?

A. Approximately 50 percent. The higher types of the pneumococcus are more commonly found in bronchopneumonia. In infants and preschool children, Types VI, XIV, and XIX are particularly common. The hemolytic streptococcus, staphylococcus, Friedlander's bacillus, and influenza bacillus are more often the causative microörganism in bronchopneumonia than lobar pneumonia.

Q. Does pneumonia caused by two types of pneumococcus ever coexist in a patient?

A. Mixed pneumococcus pneumonias do occur. Occasionally a pneumococcus and a streptococcus or other microorganism are coexistent.

Type specific antipneumococcus serum

Q. What is type specific antipneumococcus serum?

A. It is the refined blood serum of animals (usually horses) which have been immunized against a specific type of the pneumococcus. The animal is inoculated with increasingly large injections of the specific pneumococcus at short intervals until it develops a high degree of immunity and a potent serum can be withdrawn. Making antipneumococcus serum is a long, tedious process, often involving a year or more. Not all the types create an equal response in the animal's blood so that some serums are more difficult to produce than others.

Q. Is antipneumococcus rabbit serum as effective as antipneumococcus horse serum?

A. There is reason to hope that antipneumococcus rabbit serum will be the serum of the future. At present there is not *sufficient* knowledge regarding its effectiveness and the reactions to which it gives rise to recommend its *general* use, though the limited evidence at hand is favorable.

Q. Will serum prepared for one type of pneumonia have any beneficial effect on a pneumonia caused by another type?

A. None whatever; *i. e.,* Type I antipneumococcus serum will have absolutely no effect on a pneumonia caused by Type II pneumococcus.

Q. If two types of pneumococcus are causing a mixed infection in a patient, can two types of specific antipneumococcus serum be given simultaneously by the physician?

A. If serums are available for both the types of pneumococcus causing the mixed infection they may be given simultaneously.

Q. How much serum constitutes adequate treatment?

A. The attending physician must determine this on the basis of such factors as: (1) The type of pneumococcus causing the pneumonia (2) the duration of the disease (3) the presence or absence of bacteremia (4) the extent of the lesion in the lung. Once treatment is begun it should be continued at two- to four-hour intervals until definite improvement is evident, or until a sufficient amount of serum has been injected to warrant a favorable response. In cases which do not respond *as expected,* the blood and sputum should be rechecked for the type and a careful examination

should be made for additional foci of infection, such as empyema and otitis media.

Q. Are repeated doses of serum administered if the patient has an unfavorable reaction?

A. Continuing serum therapy will depend entirely on the judgment of the physician, after weighing such factors as the degree of infection and the severity and type of the reaction. The physician may deem it advisable to continue treatment with appropriate precautions even in the face of an anaphylactic reaction, if the patient has a bacteremia or if for other reasons the prognosis is poor.

Q. How does the serum act in overcoming the infection?

A. The capsule surrounding the pneumococcus serves as a protective coat against the white blood corpuscles and other phagocytic cells of the patient. Serum which is specific for the type of microörganism causing the pneumonia alters the capsule of the pneumococcus in such a way that the white blood corpuscles and other cells can engulf and destroy the pneumococci. Type specific antipneumococcus serum gives a ***passive immunity*** to the patient.

Q. Is serum therapy limited to persons within certain age-groups?

A. It is potentially of value at all ages. The case fatality rates for the various ages are not the same—the lowest being the childhood group, exclusive of infants. Pneumonia is nevertheless the second most common cause of death in childhood, exceeded only by accidents. There is an increasing tendency among pediatricians to treat children with serum.

Q. Is serum indicated in bronchopneumonia?

A. Serum treatment is indicated fully as much in bronchopneumonia as in lobar pneumonia if the causative microorganism isolated from the patient's sputum or blood is a pneumococcus for which type specific serum is available. The early institution of treatment in these cases is just as important as in lobar pneumonia but is often more difficult because the beginning symptoms are not so pronounced and therefore do not lend themselves as readily to early diagnosis.

Q. Does serum therapy decrease the percentage of complications from pneumonia?

A. There is as yet no compiled information indicating a decrease in complications. However, there is reason to believe that they should be lessened by very early serum treatment. On the other hand, in patients so seriously ill that they might have died except for serum therapy, the incidence of complications may be expected to be high. The fact of survival of these cases is a tribute to serum therapy.

Bacteriological diagnosis

1. Sputum examination

Q. How is the type of pneumococcus usually determined?

A. It is determined by microscopic examination of the patient's sputum. The capsule of the pneumococcus will swell when placed in contact with serum of the same type. Separate portions of sputum are mixed with the various types of serum and the type is determined by the presence of visible swelling of the capsule of the pneumococcus in one of these serums. This test is called the *Neufeld test.* It can usually be completed in less than one hour. It is not a simple test, however, and should be made in a qualified laboratory.

Q. How should sputum be collected for the purpose of typing?

A. Any clean container (free from disinfectant) in which the specimen can be kept moist and uncontaminated is satisfactory. Mucus from the lung or bronchi is the only acceptable specimen. The nurse is justified in using any reasonable means to make the patient raise

a satisfactory specimen as soon as possible after onset of the disease. A change in position of the patient to give greater freedom and relief from pain in coughing may prove highly effective.

Q. How can a sputum specimen be obtained from an infant or a child?

A. This procedure is best carried out by the physician. A strand of mucus from the lung or bronchi may often be caught on a swab introduced into the throat in such a way as to induce a cough. This swab should then be put in a clean container. Care must be taken not merely to swab the throat, because the pneumococci so obtained are less certain of being the ones causing the pneumonia than are those obtained from real sputum. A specimen for typing also may be obtained, if necessary, from the stomach contents of a child—since children tend to swallow their sputum.

2. Blood examination

Q. Why is a blood culture important?

A. A blood culture indicates the presence or absence of pneumococci in the blood stream. Therefore, it is a finer index of the severity of the infection than can be derived from many clinical signs. It is an important guide to serum dosage. The outcome for bacteremic cases is much less favorable than for nonbacteremic cases, and a larger dosage is indicated. One of the desired effects of serum is its action in sterilizing the blood stream. Blood cultures also serve as a check on the type of pneumococcus found in the sputum. When pneumonia is treated in the home or in rural areas it may not be possible to take a blood culture because of lack of facilities.

ADMINISTRATION OF SERUM AND RELATED NURSING FUNCTIONS

General considerations

Q. What are the essential steps which the physician usually will consider in the administration of type specific antipneumococcus serum?

A. 1. Determination of the type of pneumococcus causing the pneumonia by laboratory examination of the patient's sputum, and if possible, of the patient's blood.

2. Careful history for allergic manifestations in the patient with particular reference to the following: asthma, hay fever, or urticaria due to horse products or horse emanations; asthma, hay fever, or urticaria due to any other protein substances; previous injections of horse serum, such as diphtheria toxin-antitoxin or tetanus antitoxin, particularly within two years.

3. Preliminary intradermal or conjunctival tests for serum sensitivity.

4. Administration of full dose, if previous tests are not contraindicative.

Q. How is serum administered?

A. By intravenous injection. Most nurses have assisted with intravenous treatments sometime during their experience, and the nursing assistance required in serum administration is essentially the same. The *details* of such assistance will vary considerably with physicians and the different techniques which they employ—*e. g.*, such variations as the use of the gravity method or direct injection with a syringe.

Q. What considerations should a nurse give to the patient's needs prior to beginning serum treatment?

A. 1. A feeling of apprehension in regard to this new treatment on the part of the patient or members of the family is natural. The nurse can by her mere attitude of confidence and competence do a great deal to aid the physician in allaying fear and enlisting coöperation.

2. Antipneumococcus serum is given slowly. The entire treatment including tests, may take from one to several hours depending on such factors as the amount of serum given and the technique employed. The patient should be

given the bedpan and otherwise made as comfortable as possible before treatment begins so that he will not become restless during this prolonged procedure. Such simple nursing considerations are as important as the nurse's more specific duties. It is advisable to have an emesis basin at hand in the event of vomiting during the treatment.

Preparation of equipment

Q. Should syringes, needles, and tubing for serum administration be dry sterilized or boiled?

A. Dry sterilization is more satisfactory since water in the syringe, needle, or tubing is likely to precipitate small amounts of the serum. This hazard can be avoided by rinsing boiled equipment with sterile physiological salt solution before use. An advantage of boiling equipment in the home is that when syringes and needles are scarce the same ones can be reboiled and used for various phases of the tests and treatment. The intervals between steps are usually sufficiently long to permit this.

Q. To what temperature should antipneumococcus serum be warmed before injection?

A. Care must be taken not to overheat any serum, since high temperatures will cause coagulation and total loss of a valuable substance. Both the serum and the salt solution *should be warmed in the vials to body temperature* and kept at approximately that temperature throughout the injection. The tops of the vials of serum and salt solution should be cleaned with iodine and alcohol by the nurse or physician before the needle is inserted to withdraw their contents.

Administration of pneumonia serum and related nursing functions

Tests for sensitivity

Q. What is the first important step in the preparation for sensitivity tests and serum administration?

A. Before any testing is begun, 1 cc. of a 1-1000 dilution of fresh adrenalin chloride should be prepared in a sterile hypodermic syringe and needle by the nurse or physician. This should be kept close to the bedside during the entire treatment, ready for immediate use.

Equipment:

Adrenalin chloride 1 cc. of 1-1000

Hypodermic syringe (tuberculin) and needle

Alcohol, and cotton or gauze sponge for applying



1cc Adrenalin 1-1000

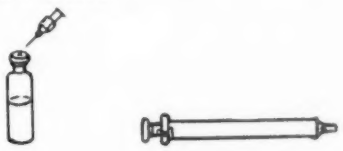
Q. How does a physician do an eye test?

A. Equipment:

Small syringe and needle (the same syringe can be used for eye and skin test)

Vial of normal horse serum

Vial of sterile physiological salt solution for dilution, if desired



Normal horse Serum (Diluted)

Tuberculin or Hypodermic Syringe

Procedure: Both eyes are examined for redness and for watering prior to making the test. A drop of diluted normal horse serum is instilled into the conjunctival sac of one eye. The nurse should watch the patient in order to keep him from rubbing his eye following introduction of the horse serum, since the test might be falsified by so doing. If itching and injection (reddening) of the conjunctiva occurs within from twenty to thirty minutes, the test is considered positive. The eye test is a gross test and positive reactions are rare.

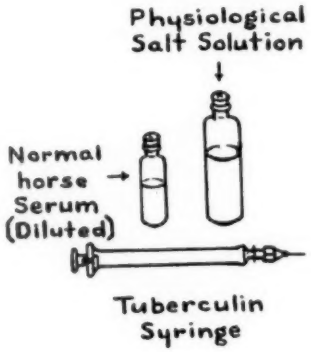
Q. How does a physician do a skin test?

A. Equipment:

Tuberculin syringe and needle (26 gauge)
Vial of normal horse serum
Vial of sterile physiological salt solution
Alcohol for cleansing flexor surface of arm
Cotton or gauze sponges for applying alcohol

Procedure: The flexor surface of the arm should be gently cleansed with alcohol, care being taken to avoid reddening. An intradermal injection of diluted horse serum is then made by the physician. He may also do a control test with sterile physiological salt solution prior to the serum test. The nurse should watch the patient to prevent anything scratching or rubbing against the test in order to avoid a false reaction. A wheal surrounded by an area of redness, appearing within twenty to thirty minutes, indicates a positive reaction. Such reactions occur occasionally and when they do they serve as an important guide to the judgment of the physician in continuing therapy.



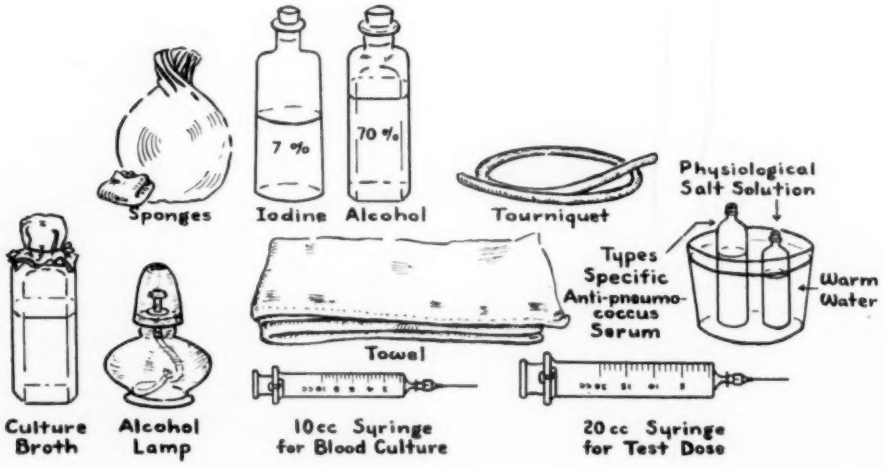


Q. How does a physician do a blood culture?

A. Equipment:

Iodine 7 percent and alcohol 70 percent for cleansing arm surface over vein
Cotton or gauze sponges for cleansing arm
Tourniquet
Sterile or clean towel to place under the arm
Vial of media for blood culture
Lamp for flaming *mouth* of media flask

Procedure: If blood is to be taken for culture the physician usually withdraws



it before the injection of any serum into the blood stream, since the serum tends to sterilize the blood stream. The cubital space of the arm is cleansed with iodine and alcohol; the tourniquet is applied, and blood is withdrawn from the vein with needle and syringe by the physician. As the physician is withdrawing the blood the nurse should flame the mouth of the media flask, release the tourniquet when told, and hold the flask in a tipped position as he ejects the blood from the syringe into the flask. The mouth of the flask is then flamed and the plug inserted; the flask is gently rotated to mix the contents and is then set aside. Strict aseptic technique must be maintained to prevent contamination of the culture.

Q. How does the physician administer an intravenous test dose and the full dose of serum?

A. Equipment:

Iodine 7 percent and alcohol 70 percent for cleansing arm surface over vein

Cotton or gauze sponges for cleansing arm

Tourniquet

Sterile or clean towel to place under the arm

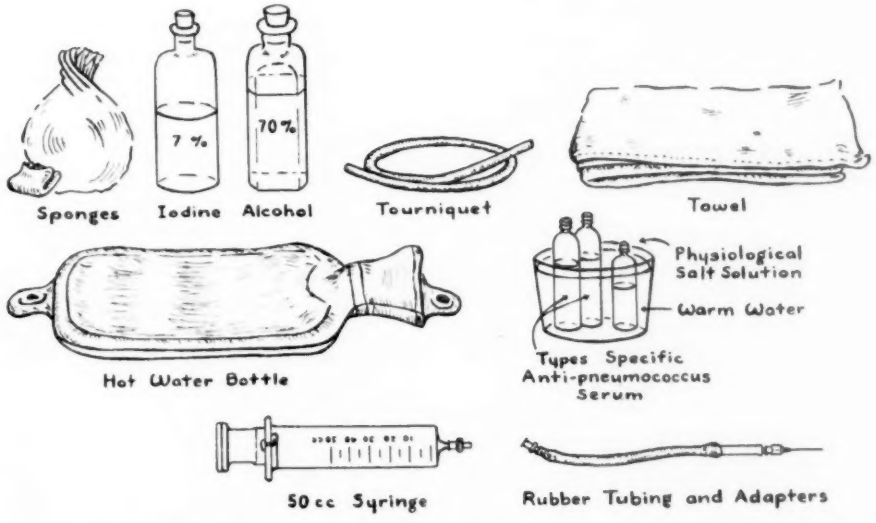
Vials of type specific antipneumococcus serum

Vial of sterile physiological salt solution for dilution, and for rinsing of boiled equipment

Rubber tubing (5 to 7 inches) with glass adapter at syringe end and metal adapter at needle end

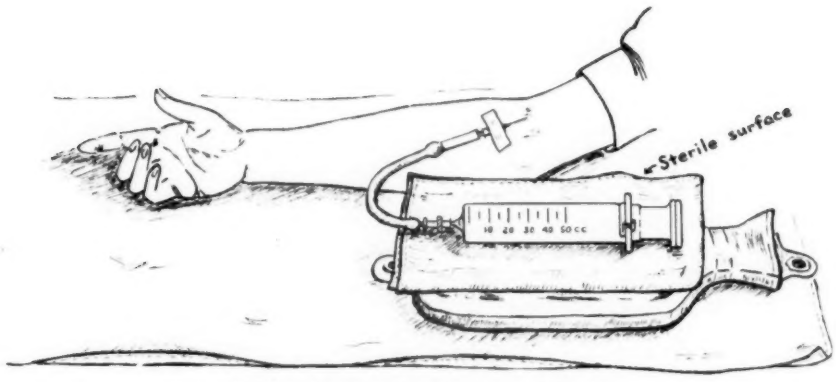
Hot water bottle on which to rest large syringe during administration

*Procedure:** If a blood culture has been taken by the physician just before the test dose, the needle may be left in the vein, and the blood-filled syringe detached; the syringe previously prepared with the test dose of diluted antipneumococcus serum is then attached immediately to the needle in the vein, and the contents slowly injected. This diluted dose is thought to be a finer though more drastic test of sensitivity than the others discussed.



The full treatment dose is given in exactly the same manner as the intravenous test dose except that a larger syringe may be needed, depending on the quantity of serum to be given. The degree of concentration of the available types of serum is often quite variable in terms of units per cc., but the total number of units per vial is usually uniform. Since the serum is usually given slowly, the flexible equipment indicated

* An attempt has been made to outline only one technique. Many equally effective—or possibly more effective—variations will be encountered.



Keeping the serum warm during treatment

in the illustration has been found convenient by the Bureau of Pneumonia Control of the New York State Department of Health. The needle is easily kept in the vein during the prolonged period of injection, and sudden movement or restlessness on the part of the patient is less likely to cause displacement. Also, the serum may be kept warm by resting the syringe on the hot water bottle beside the patient's arm. The nursing assistance required at this time is variable. The nurse should stand by throughout the period of injection, ready to assist whenever necessary.

During the administration of the test dose and the full dose, the nurse may be required to help steady the patient's arm or to hold the syringe and tubing (if used) while the needle is being inserted into the vein. Or she may be asked to check the blood pressure for a significant rise or drop, or to observe the patient for changes of importance.

Evidences of beginning reactions may occur at any time during the administration of either the test or full dose, although they are thought to be more likely to occur, if at all, during or within an hour following administration.

Signs of beginning dyspnea are important. Any changes in color such as flushing, cyanosis, and appearance of hives are significant since they may be the first evidence of reactions. Their occurrence should be brought *quietly* to the physician's attention if he is in a position where he cannot observe them. At all times during this treatment the syringe of adrenalin chloride 1-1000 should be close to the physician at the bedside.

Reactions following the administration of type specific antipneumococcus serum and related nursing functions

Q. What are the reactions which are likely to occur following the administration of type specific antipneumococcus serums?

A. 1. Anaphylactic reactions due to sensitivity of the patient to horse serum usually occur during the injection or within an hour after its administration. Such reactions may vary from facial flushing to marked cyanosis; from slight dyspnea to severe asthma; from slight increase in heart rate to a rapid, weak pulse. And they may progress to shock-like symptoms and death. Lumbar or abdominal pain or a feeling of substernal pressure are common early symptoms. Urticaria is perhaps the most frequent of all. All or one of these symptoms may be present in varying degree.

It is advisable that even any slight change of this nature be considered significant and reported immediately to the physician if he is absent from the room or where he cannot observe it. Orders for the administration of adrenalin

should be obtained from the physician before he leaves the home though he will no doubt remain until he is reasonably sure that anaphylactic reaction will not occur. The nurse should stay *close to the patient's bedside* until the period of such possibility has passed; for when reactions of this nature occur, a few seconds' loss of time may prove fatal.

2. Thermal reactions are not anaphylactic. They appear to be due to some factor in the serum itself plus a factor of individual susceptibility. Such reactions may occur during the injection or within one-half to two hours following serum administration. Refinement of the serum is serving to eliminate the majority of these reactions. The usual nursing care for chill by the application of blankets and external and internal heat is indicated. The temperature should be taken frequently enough to record the maximum temperature reached and approximately every fifteen minutes until evidence of reaction has subsided. An excessively high temperature continuing for any length of time can of itself prove fatal, and measures such as ice sponges, ice cap to head, cold drinks, or even ice water enemas and other more drastic measures may be required. Orders for the treatment of such reactions should be obtained from the physician before he leaves the home. Since the treatment for them involves mostly nursing procedures, it should not be withheld in the event that orders were not obtained before the physician left and he cannot be reached. Such reactions, though mostly mild, have occurred infrequently in cases treated with Type I antipneumococcus serum in New York State.

3. Serum sickness following the injection of alien blood serum occurs quite frequently. Symptoms are apt to begin between the sixth and fourteenth day after the first injection, and the usual symptoms are urticaria or skin rash, puffiness of skin, glandular enlargement, joint pains, and fever. Serum sickness is more annoying than serious, discomfort being the chief feature. The physician's orders and prescriptions should be obtained for allaying the itching and other discomfort.

Q. What nursing care should be given a pneumonia patient following serum administration in cases where no reaction occurs?

A. Routine nursing care with emphasis on absolute rest is needed fully as much following serum injection as before. If the physician wishes the temperature and pulse taken more frequently than has been the routine, he will leave orders to this effect. Otherwise the patient should not be disturbed unless beginning signs of untoward serum reaction or crisis occur.

Q. How soon does a beneficial reaction to serum injection manifest itself?

A. That depends on the type of pneumococcus, the degree of infection, the day of the disease on which therapy is started, and numerous other clinical and bacteriological factors. In the majority of uncomplicated, non-bacteremic Type I pneumonias, adequate serum therapy administered within the first three days may be expected to result in a marked response within twelve hours and frequently induces a complete crisis in even a shorter time.

Q. How does serum crisis differ from a spontaneously occurring crisis?

A. They are essentially the same, except that the spontaneous crisis is based on the principle of active immunity and the serum crisis on passive immunity. Both crises are characterized by a fairly rapid drop in temperature, pulse, and respiration. The nurse should be alert to and should report to the physician a continuing rapid pulse despite an apparently satisfactory drop in temperature, as this may indicate the development of circulatory collapse or other complication. Occasionally a favorable reaction to serum will manifest itself by a grad-

ual drop in temperature and pulse which is known as the recovery by lysis. It occurs in a fairly large proportion of untreated cases.

Q. Is the convalescent care of the two crises the same?

A. A carefully guided convalescence is equally as important following a serum crisis as following a spontaneous crisis. The physical involvement and the need for repair after each of the crises will probably be the same in nature, if not in extent. Both demand continued rest, good nursing care, and a strengthening diet. The total period of bed rest is apt to be shorter following serum crisis, which has reduced the course of acute disease and prevented the extensive physical depletion attending a more prolonged acute illness. It is often more difficult to control the activities of a patient following serum crisis because of this fact. Isolation serves—in convalescence as well as in the acute phase—to limit the spread of infection and to protect the patient from fresh infection brought in by visitors.

As has been pointed out by numerous authorities, satisfactory nursing care of a pneumonia patient is vital to his recovery. Such care calls for considerable knowledge and for skills of a diverse nature. The exercise of judgment in giving adequate care without exhausting the patient is essential. The advent of serum therapy has not minimized this role, but rather has added to the need for quick, effective aid and keen powers of observation.

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NOTE: This is the second of a series of three articles on various aspects of pneumonia control that are of special interest to the nurse. The third article, by Dr. David D. Rutstein and Emma H. MacChesney, will appear in an early issue. It will discuss oxygen therapy.

PNEUMONIA EXHIBIT CHARTS

The Metropolitan Life Insurance Company has prepared a group of exhibit charts outlining some of the facts relating to the incidence of pneumonia in the general population; the results that have been obtained with serum treatment; some salient points relating to etiology, diagnosis, typing, and therapy; and the activities of the pneumonia control program being carried on in New York State. The charts were shown at the scientific exhibit of the annual meeting of the American Medical Association at San Francisco, California, June 13-17, 1938. These charts are available for loan to professional meetings and may be obtained by addressing Welfare Division, Metropolitan Life Insurance Company, 1 Madison Avenue, New York, N. Y.

Public Health Programs in Kiwanis

By WILLIAM M. SUTTON

The interest and support of lay groups in the community are the foundation on which effective public health nursing services are built

MANY LAY organizations are vitally concerned with promoting public health in their communities, and they have often been responsible for developing programs of public health nursing. Everyone knows about activities such as the Parent-Teacher Association's work in the Summer Round-Up; the recent campaign of the General Federation of Women's Clubs for cancer control; and the programs carried on for crippled children by various organizations. Many other health activities are promoted by these lay organizations. Because of the great value of close coöperation of the public health nursing agency with these groups, and the need for effective use of such interest, the Director of the Department of Research of Kiwanis International has been asked to tell about its work in stimulating and aiding community public health programs and to point out ways in which local agencies can make use of this service organization. Members of Kiwanis clubs should make good prospective board members and volunteer workers in this field.

EVELYN K. DAVIS

KIWANIS CLUBS are autonomous organizations of business and professional men who capitalize their fellowship for constructive, volunteer community service. They are *service clubs* because they are dedicated to the ideal of service, fellowship being a means toward an end rather than the end itself.

The kind of service that the clubs give, independently and in coöperation with other organizations, depends on the needs of the different communities in which they are located. For Kiwanis does not specialize in any one field, although the belief that it does is all too common among social workers. In fact, so diverse are the programs that a classification of them would read like the subject index of a combined national directory of social and public administration agencies.

In the field of public health, Kiwanis is actively engaged in a variety of programs designed to promote sanitation, health education, disease prevention, and the care of the indigent sick. The activities range from dissemination among the members themselves of information concerning all phases of the field to the maintenance of clinics and county public health nursing services on a full- or part-time professional basis.

Whatever is done is planned to coördinate with or to supplement the work of the established agencies. Where clinics are conducted by the clubs, the professional staff is usually composed of Kiwanians who are physicians and dentists, with in many instances a paid worker who is trained either in social work or in nursing or both and who combines her functions at the intake desk with the necessary clerical duties. This worker keeps in close contact with the welfare agencies, to maintain a smooth flow of referrals. In a few such clinics, the intake worker is lent by a

private agency for part-time assistance; other clinics have only a part-time clerk for record-keeping and general office detail. In no instance known at International Headquarters is there a failure to clear the cases in some way through the professional agencies, and in at least two communities the Kiwanis clinics are members of the social service exchange.

INITIATE NURSING SERVICES

Many communities owe their first public health nurses to Kiwanis Clubs, which on their own initiative have supplied a much needed service. Until the community can assume support of the nurse, she remains the entire responsibility of the club which established her service. This means that Kiwanians not only pay her salary, but provide office space and equipment and meet all incidental expenses.

Other methods of financing such a service are also followed, including a partitioning of costs between the club and the community, the community in this sense being a body of representative citizens other than Kiwanians, or perhaps the municipal or county government. It has happened that the public health nursing service established by Kiwanis has been the nucleus around which a municipality or county has built an efficient, tax-supported health unit.

Whenever a club plans a service program, it clears with other agencies to make sure it is not contemplating something that will be a duplication. The coöperation of the other agencies is obtained in planning the new service and in operating it. Not infrequently a state public health official or the executive of a public health agency—tax-supported or privately administered—in a neighboring community is called in as consultant.

The clubs are also active in planning health forums, in arranging lectures in schools, in promoting desirable public health legislation, in a general health educational program, and in a variety of other ways in this field.

INCREASING ACTIVE PARTICIPATION

Kiwanians are generous with their personal funds and with the funds of club treasuries in contributing to health agencies, and may be depended on to continue being generous. But they are making every effort to increase their participation in activities. The Kiwanis ideal of service precludes belief that a responsibility to the community has been discharged because money has been contributed, no matter how worthy the program. And members are constantly educating themselves for active service.

For this reason, the Kiwanis Club is an excellent source of valuable citizen coöperation in any community welfare program. Lay support is essential to every professional agency, and club members are not only ready to give that support but to increase and intensify it by promotional efforts among non-members. Every branch of community life is represented in a club, and through the operation of the membership rules, every member is prominent in his own branch.

Education within the organization tends to broaden the outlook of its members, to keep them acquainted with the nature of problems and their solution, and to stimulate them to service. With this kind of training behind him, the average Kiwanian, especially the chairman of the appropriate committee, is potentially an excellent board member of a public health agency. Any agency which fails to recognize this fact is overlooking an opportunity to avail itself of important lay leadership.

TO APPROACH A CLUB

Public health nurses who may want to seek the help or support of a Kiwanis Club in some program are undoubtedly interested in knowing how to bring their appeal to the club. First of all, there

should be no reluctance on their part to approach a club. Kiwanis is eager to give service and needs only to be made aware of a void in community facilities to be aroused to action.

The main avenue of approach to a club is its president. It is suggested that unless a public health worker is acquainted with another officer or member of a club, he write to the president, outlining the suggested program and offering to address the club or the appropriate committee. It is further suggested that the appeal be on a basis of participation rather than of financial contribution, although as has been pointed out before, public health workers will find the clubs generous financially.

Some representative examples of public health activities carried on by Kiwanis are described briefly here:

COMMUNITY HOSPITALS BUILT

A community hospital was a crying need in Brooksville, Florida, whose club reports: "In 1934, there was in Brooksville a frame dwelling house which had been converted into a hospital. The equipment was inadequate; the facilities were inadequate; and the entire burden of operating the institution was being carried by a small group of civic-minded citizens almost at the breaking point. The Kiwanis club, aware of this situation, decided to focus their energies on the building of a modern hospital. They were able to induce the county commissioners to levy a small tax to provide a fund to supplement certain expenses, the rest of which were carried by the Works Progress Administration. The lot on which the building is located was donated by the family of a Kiwanian. The building was constructed and equipped under supervision of Kiwanians. The building now boasts accommodations for thirty patients including a ward for Negro patients which will accommodate eight."

The building of a hospital was also promoted and made possible in Fort Pierce, Florida, whose club reports: "A special committee was appointed recently to raise the remaining funds for the $70,000 hospital for Fort Pierce, of which the Works Progress Administration portion was $50,000, the remaining $20,000 to be raised by the community. The Kiwanis committee speedily succeeded in raising the money and a hospital is assured in the near future. A minstrel show put on by the club will provide funds for helping to furnish the new hospital."

A community program which led to the construction of an addition to the county tuberculosis hospital was sponsored by the club at Aberdeen, Washington. This club also brought a speaker from the State Department of Health to talk to the pupils in the Aberdeen schools.

HEALTH UNITS PROMOTED

The community health council was brought into existence through the efforts of the club at Alton, Illinois, and through this council the establishment of a full-time health department was actively promoted.

A program to sponsor the establishment of a health unit is being prepared by the club at Cordele, Georgia.

The establishment of a county health unit is being actively promoted by the Eustis, Florida, club at the present time.

Efforts in behalf of new health legislation have been made by clubs in the state of Georgia. Several clubs—including those at Jackson, Baxley, and Cedartown—coöperated with other organizations in an effort to bring about passage of the Ellis Health Law which provides for the full-time employment of a health officer and a public health nurse in each large county and in districts of two or three small counties. Kiwanians are preparing for another battle in behalf of this law.

A project serving a group of counties was undertaken by the club in Madisonville, Kentucky: "Sometime ago we made a successful effort toward bringing about the establishment of a division of the public health service to serve about twenty counties in western Kentucky. The club defrayed part of the $15,000 expenses for equipment including sterilizers, incubators, cabinets, and shelving. The public health office is maintained in Madisonville. The club also organized and directed a successful campaign to raise funds for a much needed hospital in Hopkins County.

COMMUNICABLE DISEASE CONTROL

Several clubs have participated in the campaign for the control of syphilis. For example, the club in Hendersonville, North Carolina, reports: "The antisyphilis educational campaign is being actively carried out. The following methods are being used: lectures with moving pictures in the high school; lectures and pictures for the public; distribution of literature on the subject; series of lectures to church groups; observation of Health Week with instructive lectures in school assembly. Held illustrated lecture—free to public at the high school auditorium—on syphilis, with emphasis on the congenital type. Conducting antisyphilis campaign in the county."

Coöperation in a program for the prevention of other communicable diseases became the interest of the Jasper, Texas, club: "The annual report shows that the testing of younger children of the Jasper school for susceptibility to diphtheria and the furnishing of toxoid for those found to be in need of immunization is now being carried out. The Kiwanis club also coöperated with other civic organizations in putting over the tuberculosis seal sale and will help direct the local antituberculosis work, consisting of tests and x-ray examinations in the schools, which will be financed by the local percentage of proceeds of this sale."

The expenses of 32 children who spent three weeks at the tuberculosis preventorium were paid by the Asheville, North Carolina, club, which also coöperated with the city in a program under which 2000 school children were given the tuberculin test.

MANY HEALTH INTERESTS

A special community health program with the local health officer for speaker was planned by the club in Fort Scott, Kansas, "to conform to the urge of International that we promote a community health week."

A comprehensive program is carried on through an underprivileged child committee in the Jackson, Georgia, club which operates with the advice of state visiting nurses. Two members of the committee are advisory members of the county welfare board, and the chairman of the committee is the chairman of the county child health and welfare council and of the county chapter of the American Red Cross. The Red Cross chapter has graduated 186 persons in first aid and established a first aid station on the main highway in the county.

The foregoing are only a few of the public health activities of the clubs, but they give an idea of the direction taken. In many communities, where facilities are lacking and no amount of agitation will induce the community to provide for them, Kiwanis Clubs maintain public health nurses, medical and dental clinics, health educational forums, and a variety of other activities, making a demonstration of the value of these services with the hope that the community will carry them on.

The clubs are deeply engaged in public health work. They are dedicated to service and are eager for the suggestions and coöperation of the other agencies of service. Public health organizations will find this interest of great value to them.

Administering an Anesthetic to a Maternity Patient

By FREDERICK C. FREED, M.D.

An obstetrician says that the administration of an anesthetic is the physician's responsibility but the nurse should be prepared to assist in an emergency

THE RESPONSIBILITY for the administration of an anesthetic to a patient must always be assumed by a physician. However, the need for an obstetrical operation and accompanying anesthetic not infrequently arises under conditions where only one physician is available. Under such circumstances if a nurse is present she may truly be an "angel of mercy" giving hope, reassurance, and relief to the patient and her family, and invaluable comfort and moral support to the physician. The physician feels better physically and psychologically to undertake an obstetrical operation when he is freed from the encumbrance of using a terror-stricken husband, mother, or other member of the household as anesthetist.

It is ideal from the standpoint of comfort and safety to hospitalize maternity patients. At the present time, however, this is not always possible. More than thirteen hundred of our thirty-three hundred counties have no registered general hospitals.*

In 1936, two hundred and fifty thousand babies were born without a physician or nurse present, and fifteen thousand of these had only a relative or neighbor in attendance. In rural United States in the same year some eighty-six out of every one hundred expectant mothers were delivered in their homes.** There are only about six thousand five hundred public health nurses employed in rural areas***—not enough! Many counties are now offering not only antepartum but delivery aid to physicians with their patients, so that fortunate patients get to know and have confidence in these nurses before their labor actually begins.

DELIVERIES IN HOMES

Home obstetrics is almost wholly in the hands of family physicians and general practitioners who often do not have adequate equipment or competent assistants on call to use in emergencies. Unforeseen complications do arise during deliveries when someone must give an anesthetic. A neighbor or excited husband is a poor amateur anesthetist; for they give too much or too little, and the physician may find himself compelled to carry on two functions at the same time, thus sacrificing asepsis and efficiency. Although many states have enacted laws entrusting the responsibility for an anesthetic only to licensed physicians, it does seem an act of preparedness that a nurse should be professionally equipped to serve in an emer-

*Interdepartmental Committee to Coördinate Health and Welfare Activities. The Need for a National Health Program. Report of the Technical Committee on Medical Care. Washington, D. C., 1938. Page 33.

** *Ibid.*, page 7.

*** Reid, Mabel. "1938 Census of Public Health Nurses." PUBLIC HEALTH NURSING, November 1938.

gency. The knowledge that she is competent will react favorably on the patient, family, and physician, and will make for better obstetrics.

A patient in labor almost invariably takes an anesthetic well. She receives it with a sense of comfort instead of alarm, her thoughts being fully occupied with her condition and her period of suffering. However, a nurse who is called upon to give an anesthetic must not allow herself to be misled into a feeling of false security by the apparent ease and simplicity of its administration. She must be constantly on the alert for the approach of danger signals, realizing she has in her hands a powerful drug and the lives of two individuals.

CHLOROFORM VERSUS ETHER

Chloroform and ether are the drugs that are most frequently used in home obstetrics. Although chloroform may be more dangerous to use, it enjoys a wide patronage among general practitioners. It does have some advantages over ether that are worth remembering. The choice should always be made by the physician in attendance, and the drug chosen should be available. Chloroform is more pleasant to inhale. It requires a smaller quantity and less time to get the same degree of anesthesia. It is less irritating. It is less inflammable, and can therefore be used more safely in homes where there are open fires and oil or gas lights. It does possess some inherent dangers, and should never be used for patients suffering from the so-called toxemias since it may have a deleterious effect on already damaged liver or kidney tissue.

A nurse should never permit herself to hurry or "push" an anesthetic. She should give her undivided attention to the patient and her duty at hand, and show a quiet confidence in case any untoward symptom arises. A few thoughtful and safety-first procedures on the part of the nurse are suggested here for administering an anesthetic.*

1. Assemble emergency equipment that may be needed, such as a gauze bandage to hold the patient's mouth open in case of vomiting, an emesis basin, towels, and sterile equipment for hypodermic medication.

2. Have the patient void before giving the anesthetic. The physician may order the catheterization of the patient if she cannot void. Or he may catheterize her himself since he is scrubbed for the delivery.

3. Give no fluid or food immediately before an anesthetic is anticipated.

4. Place the patient in a good light, if possible, so that her color can be noted at all times.

5. Remove dental plates since they might slip down the throat and choke an unconscious patient.

6. Anoint the patient's face with oil, lard, or vaseline to prevent a burn. Castor oil or olive oil may be dropped into the eye either as a prophylactic or treatment if some of the anesthetic should get into the eye.

7. Loosen all clothing, especially about the neck, so that respiration will not be hindered.

8. Cover the hair with a towel or cloth for protection.

9. Remove the pillow from under the patient's head since this leaves the larynx in a better position for breathing.

10. Cover the patient's eyes with gauze or a handkerchief for protection, explaining the purpose of this procedure to her.

ADMINISTRATION OF ANESTHETIC

Noises and talking in the patient's

*The attending physician assumes responsibility for knowing the condition of the patient. The nurse will, however, note the temperature, pulse, and respiration, and she may be asked to take a blood-pressure reading before the anesthetic is given and perhaps at periodic intervals later.

room should be kept at a minimum. Talking not only disturbs the patient at the time, but may be embarrassing later; for the sense of hearing is retained when the patient is only partially under the influence of the anesthetic, and her memory sense is good.

If no mask is available, a napkin or large handkerchief may be pressed into service. The patient should be permitted to "smell" this at first without any drug, and she should be instructed to breathe through her nose or mouth, or both. The patient's chin should be held well forward by a hand placed under the angle of the jaw in order that she may have adequate room for breathing. The anesthetic should be dropped from the bottle or can, drop by drop, with the container held from six to eight inches above the face in order to be able to estimate how much is being dispensed, and to give the drug an opportunity to vaporize.

Chloroform is usually dispensed in colored glass cork-stoppered bottles, while ether comes in cans with soldered tops. The cork should fit tightly in the container so that no accidental spilling of the entire contents will occur. A wedge may be cut in the cork, and a wick of cotton placed in it so that the bottle may be used as a dropper. If a fresh can of ether is used, two pin holes may be made in the top.

Talking quietly to the patient may allay nervousness and make her breathing easier. Often one can make more haste by going slowly. If she shows signs of throat irritation, as evidenced by coughing or retching, the drug should be withdrawn and she should be permitted to have a few breaths of air before the anesthetic is continued.

If she struggles, caution should be exercised lest she get too much, because a patient generally takes in a goodly portion of anesthetic during these efforts. One should not try to prevent her from moving, as it is terrifying to a semiconscious patient to be held firmly. However, one should take care that she does not pull the mask away or harm herself. Special care must be taken at this time to guard against a face burn. During such a period, the anesthetic should not be stopped, but actually increased to get the patient past the retching or vomiting stage. If she begins to vomit, the mask should be taken away at once, and the mouth should be cleansed to prevent vomitus from being sucked into the larynx or trachea. A gauze bandage may be used to hold the mouth open during such cleansing efforts.

Again one must watch for vomiting after the operation has been completed and the anesthetic discontinued. The patient may be noisy and talk at random during this stage. But soon she will quiet down; her breathing will become quieter and deeper, and she will appear to be in a profound sleep.

Even though the patient is under surgical or deep anesthesia, the breathing not infrequently becomes more noisy when the physician makes efforts to dilate the vagina or cervix, or makes traction during a forceps delivery or breech extraction. If an arm is picked up while the patient is under this degree of anesthesia, it is found to be flaccid and will fall limply, no resistance being offered. The eyeball shows little or no movement when the lids are held apart. The pupil is dilated, but reacts to light. If a fingertip gently touches the eyeball, there will be no reaction of the lids. It generally takes from five to fifteen minutes to reach this stage; then the patient is said to be "under." Little anesthetic is required to carry her along from this point.

DANGER SIGNALS

One must be alert for danger signals at all times. These are chiefly the *breathing, pupillary reflex,* and *color* and *pulse* changes. If the breathing be-

comes shallow or jerky; if the pupil which is dilated fails to contract when exposed to the light; if blueness or extreme pallor of the face come on, or the pulse becomes intermittent—the mask should be removed at once and the physician's attention called to the condition.

Danger signals appear more suddenly with chloroform than with ether. In such a situation, the patient should be given plenty of air, with her head drawn to one side and lowered, and her tongue pulled forward with a piece of gauze or a handkerchief. The physician should take active charge of the management before the institution of artificial respiration or the administration of hypodermic stimulation becomes necessary. A nurse cannot legally sign a death certificate. Therefore she should not be too confident and self-assured to acquaint the physician with untoward symptoms before suspended animation occurs.

A patient who has had an anesthetic should never be left alone until she has returned to full consciousness. She may have difficulty in voiding after an anesthetic, and the bladder may become greatly distended. Therefore it is well to have her void or catheterize her before leaving the house, especially if the next nursing visit is to be some hours later.

A nurse doing public health duty should familiarize herself with the technique and dangers of anesthesia in order that she may be qualified to administer it in an emergency. Any anesthetic should be administered with care, prayer, and plenty of air!

How Would You Answer This?

The maternity forum this month is given over to a question which has come to the National Organization for Public Health Nursing several times recently. An answer will be published in the January 1939 issue. In the meantime, won't you send in your suggested answer and also your questions on maternal welfare, to Maternity Center Association, 1 East 57 Street, New York, N. Y.?

1. What is the best technique for doing the perineal dressing during the postpartum period?



Teaching the Diabetic Patient

By HARRIET CROSS, R.N.

A diabetic clinic which lays stress on the education of both patient and nurse is described here by the clinic nurse

THE CARE and teaching of diabetic patients at King County Hospital in Seattle, Washington, is conducted largely through the out-patient department. Many of the patients admitted have had private medical supervision and have been transferred to the county hospital when requiring drugs and clinical laboratory service without cost. The plan for intensive health supervision of these patients includes a program of individual and group instruction carried on by physician, nurse, and nutritionist.

PERSONNEL

The medical service is voluntary. One staff physician, the medical resident, and two internes are on duty each session. The nutritionist and student assistant serve the patients, formulating and adjusting dietary programs. One graduate nurse, a postgraduate nursing student, and a student in the basic nursing course are in the clinic each period. A Junior League volunteer records the laboratory findings and assists late patients with weighing.

The clinic procedure is as follows. Appointments are made for 7:30 and 8:00 a.m. Saturday morning. On each visit, patients are requested to come without having taken breakfast or medications, and to bring a sample of a 24-hour urine specimen. Stopping at the clinic, each patient weighs himself and records his weight. He then proceeds to the laboratory with his specimen. If less than three percent urinary sugar is found, the patient may eat breakfast. We encourage patients to bring this meal in the form of a lunch because it permits the diabetic to stay on his program, and allows the clinic nurse and the nutritionist to observe his practices in caring for himself. A blood-sugar determination is made routinely for those patients with three percent or more of urinary sugar.

The waiting period which follows is occupied with group teaching and individual teaching. When the laboratory record is complete, the doctor interviews the patient. New diabetics are given complete physical examinations, with glucose tolerance, cholesterol, or other laboratory studies when indicated.

The dietitian works in the cubicle adjacent to the physician's, advising new patients, calculating menus, formulating cost sheets, and assisting with problems revealed in the doctor's interview. Her recommendations are sent through the social service department to any agencies which are helping the patient economically. These agencies have always coöperated in meeting individual needs.

Supplies of insulin, cotton, alcohol, syringes, needles, lanolin, and mineral oil are issued by the nurse on prescription from the doctor for the time between clinic visits, which is usually from one to six weeks.

STUDENT OBSERVATION

The undergraduate nursing student usually observes for only one eight-hour day in diabetic clinic. She has previously had diet therapy at the university and in the hospital; eight hours in medical principles and in nursing dem-

onstrations in the care of diabetes, while in the medical division; experience in bedside care of diabetic patients; and from one to three weeks in the outpatient department. The student's introduction and supervision in the diabetic clinic are given by the graduate nurse.

After morning report and orientation, the student assists in the arranging of charts and watches and helps patients with weighing. Since the majority of patients are elderly, the nurse has this opportunity for noting any difficulties in manipulating the scales or reading weights. This information is useful as individual teaching proceeds, for poor vision results in inaccurate calculation and measurement. Later, the student assists with physical examinations, observes the doctor interviewing his patients, and demonstrates insulin administration to the new patient as ordered.

GROUP TEACHING

The program of group and individual instruction permits student participation when the students have had bedside experience in the surgical and medical divisions of the hospital.

In the outline of group discussions the material is divided into four sessions conducted by the doctor, four by the nurse, and four by the nutritionist. At present, some of the doctors' time is used by the laboratory technician. The topics used for discussion and demonstration are:

1. The purpose of the diabetic clinic
2. Personal hygiene
3. Care of the feet
4. Equipment and its preparation for giving insulin at home and away from home
5. Laboratory preparation for the diabetic
6. Testing urine for sugar
7.-10. Dietary principles and their adjustments

INDIVIDUAL TEACHING

Individual instruction is given to the new patient. The patient's problems in collecting 24-hour urine specimens are first considered. The plan for each patient has to be made on an individual basis according to his needs. Factors such as habits of rising, travel time, and work and school time must be considered. Foot care—with inspection of the feet to improve the patient's observation and reporting of significant findings—is explained. Instruction is carried on week to week until the care of acidosis and coma, insulin reactions, the influence of the common cold on a person with diabetes, the dressing of abrasions, and the prevention of constipation have been discussed. A set of mimeographed sheets covering these topics is furnished each new patient.

For those placed on insulin therapy, teaching is done in a cubicle arranged with table, electric plate, small enamel pan with cover, four-inch squares of old muslin, alcohol 70 percent, sterile cotton in small rolls, U40 insulin, syringe, needle, rubber-stopped bottle marked "sterile water," rubber ball, container for waste, and mimeographed instruction sheet. Posters showing an enlarged syringe, areas of injection, and the manner of holding and inserting the syringe are on the wall.

The student nurse demonstrates the necessary hand-washing procedures, sterilization, measurement of drug, cleansing of the skin, and administration of the hypodermic on the rubber ball. Following this, the patient with his own equipment demonstrates back to the nurse by giving himself five units of insulin.

When a patient has been on insulin therapy prior to transfer to the county clinic, the nurse has him bring all his equipment and observes his procedure of administration, because of the variety in existing programs and the fact that the clinic dispenses only U40 insulin.

The student records her observations and the patient's reactions to the teaching in an effort to have data on which to

base referrals to the field agencies for the home care of the diabetic patient. Individual records—from which to make monthly summaries of supplies dispensed—are filed and the student uses the reverse side of these for her reports.

FOLLOW-UP OF PATIENTS

It was learned by observing individual adjustments and practices that certain of the patients failed in their use of diet lists as guides in preparing meals, were not accurate in measuring insulin, disregarded time of administration of insulin in relation to the taking of food, or ceased to maintain asepsis. Patients also lapsed from medical supervision. Dr. Elliott P. Joslin has stated that "no diabetic should let three months go by without a visit to a physician."[1] More recently he emphasized the importance of this activity by saying, "It is not customary in the tabulation of causes of death to include what is quite as important, namely, imperfect medical supervision, but I believe almost as many deaths to be chargeable to this deficiency as to any single factor."[2]

When errors in practices were observed, the Seattle Visiting Nurse Service and the King County Health Department agreed to follow up new cases in order to assist in the establishment of good practices. They will also investigate lapsed cases to prevent the diabetic from waiting until he is obliged to go to the clinic because of a complication of infection or gangrene. It was interesting to read in *The Hospital Survey for New York* the recommendation that greater use should be made of the visiting nurse in home supervision.[3]

PUBLIC HEALTH STUDENTS

Once each quarter the nutritionist and supervisor meet the public health nursing field students from the University of Washington to explain problems of the diabetic patient and to demonstrate the clinic's plan for care. This also provides an opportunity for discussing home problems.

The clinic introduces the nurse to the manifold problems of the patient. It gives the professional group an opportunity to practice ways and means of making the diabetic more independent. It is thought that perseverance in teaching in an effort to secure accuracy will be reflected continually in the diabetic's care of himself.

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The Nurse in the Control of Tuberculosis

By VIOLET H. HODGSON, R.N.

The methods, attitudes, and skills of the public health nurse must constantly keep pace with new knowledge and changing needs in the field of tuberculosis control

PUBLIC health nursing has played a part in the tuberculosis control program ever since this branch of nursing came into being. Phenomenal indeed have been the changes wrought in both the fields of tuberculosis control and public health nursing in the last half century. The United States has witnessed a steady increase in the number of nurses engaged in tuberculosis work, from a mere handful who devoted their entire time to this service to the thousands who are now accepting this responsibility as an integral part of their programs. Beginning with bedside care to the sick in their homes, before the sanatorium movement had established the momentum which it is maintaining today in many sections of the country, public health nursing has steadily adapted itself to the changes which the tuberculosis control movement has undergone throughout the intervening years.

CHANGES IN TUBERCULOSIS CONTROL

Indicative of the nature and extent of these adaptations is the growth of tuberculosis clinics in this country, to which an increasing amount of the time and efforts of the nurse has been given. From an estimated 20 in 1905, the number has grown to approximately 1000 clinics of a permanent nature holding close to 100,000 clinic sessions annually in 1934. In addition to these permanent clinics there are a number of itinerant services holding several thousand sessions annually.[1] A correspondingly striking growth has been witnessed in the sanatorium field where the total bed capacity (exclusive of institutions of less than 25 beds) has increased from 6962 in 1904[2] to 85,475 in 1934.[3]

Working unobtrusively in the background and yet directing every aspect of the widespread movement for control is the scientist, who has pursued the tubercle bacillus so relentlessly. An arctic atmosphere has long since given way to rest as the essence of treatment. The eye, aided by the x-ray, has placed the ear with its stethoscope in a position of secondary importance in diagnosis. Surgery has come to the aid of time in the application of rest. Nor has the terminology remained unchanged throughout this period of progress in diagnostic and treatment methods. *Refinement* in method has been the one constant element which has survived throughout the dramatic period of 36 years when the death rate in continental United States has declined from 202 in 1900[4] to 55.7 in 1936.[5] If the death rate of 1900 had continued to prevail through 1936, about three and a quarter million *more* men, women, and children would have died than has actually been the case during this period.[6]

Nor is this all. The stigma of tuberculosis has been displaced in an increasingly large number of minds by an understanding of the disease. How large a part the public health nurse by patient and repeated interpretation may have played in effecting this change it is impossible to compute.

THE CHANGING PICTURE IN NURSING

How has public health nursing responded to these changes in the tuberculosis control program? Have its adaptations been exclusively a matter of adjusting nursing methods to clinical and treatment practices? Or have there been elements in nursing which have endured throughout the years and emerged more highly refined for the present and the future? In short, have there been values which time and change have brought out in bold relief as the common denominator in all productive public health nursing?

Certainly there is no longer the widespread need for converting the home into an open-air camp, when the patient and family were dependent on the bedside care which the nurse of former days gave in lieu of present-day facilities for hospitalization. With fewer cases and more public health nurses, the emphasis has shifted from care of the patient to prevention of the disease in the contacts. More of the nurse's time is required in interpreting the value of periodic examinations and the purpose and procedures of modern diagnostic and treatment measures. To be sure, case-finding, home-visiting, clinic management, hospitalization, rehabilitation to community life, provision for the economic needs of the family, and adjustment of social problems have been familiar aspects of the nursing problem from the beginning, and will doubtless continue to be for some time to come.

To say that the public health nurse of today must be conversant with new terminology so that the terms P.P.D. and O.T., pneumothorax, phrenic nerve operations, pneumonolysis, and thoracoplasty will immediately call to mind their respective purposes is but stating an obvious premise on which professional nursing performance has always rested. To predict that further changes will occur in methods of treatment, diagnosis, and prevention, with which the public health nurse must be familiar, does not require the gift of prophesy. Advancement in the allied fields of curative and preventive medicine will determine in large measure the nature of modern public health nursing practices from time to time.

THE CONSTANT ELEMENTS

What, then, are the elements in public health nursing which remain constant and upon which the nurse relies for success in her work? How can her changing technical knowledge be transformed into increasing control of tuberculosis? From what sources are the tools derived with which this knowledge becomes power?

It is in the answers to these questions that the public health nurse will find her place of greatest usefulness in the control of tuberculosis. The tools are not new. But advances in the fields of psychology, sociology, and education have so clarified and defined their sphere of operation that greater skill is required of the nurse in applying them to a useful purpose. Refinement of public health nursing methods must therefore keep pace with developments in the fields with which it is so closely allied, just as tuberculosis control methods have been refashioned after the patterns drawn by the research worker in his laboratory and the physician in his clinical practice.

1. Knowledge is the first prerequisite to intelligent action. A clear perception of the scientific facts about tuberculosis, together with their use in everyday practice, is knowledge in action. To teach effectively involves an intimate acquaintance with the modern philosophy of education and the laws of learning. To function in a realistic world where rapid changes are occurring in the patterns of nations and families requires a constant widening of the nurse's interests and knowledge of world affairs, if success is to be achieved in her efforts with the family and the community. Indeed, it

may well be said that the world has become "the family," since none even in the remotest areas, have escaped the impact of social change.

2. With an ever-widening knowledge should come an increasing feeling of *responsibility* toward the community, for assisting in the control of tuberculosis. If this change occurs in any widespread measure, generalization in public health nursing will acquire a more realistic meaning than has hitherto been conveyed by this carelessly used term. The nurse who faces the fact that all cases are not known and that tuberculosis may be present in apparently well people will not state that measles, syphilis, or pregnancy are the only—or even major—health problems in a family until all known methods of case-finding have failed to reveal the presence of tuberculosis. No apparently well infant will then be classified as a well baby until reasonable evidence of an environment free from tuberculosis appears on the nursing record. The nurse will not employ the haphazard method of simply asking if anyone in the family had ever had tuberculosis, in obtaining a history of the disease. Instead, there will be an awareness of the many social and psychological factors that may stand in the way of a straightforward answer, if there is any fear that an admission may jeopardize the economic standing of the family.

The method of obtaining a family health history will undergo a refinement by which the information desired can be obtained more readily and accurately and with less objection on the part of the family concerned. Every family served, irrespective of service classification, will offer an opportunity for increasing the impact of the forces of control against the tubercle bacillus. Likewise, every family carried for supervision of tuberculosis will be regarded as a rich field of opportunities for rendering service in maternity, acute communicable disease, syphilis, and the many other conditions which may jeopardize the health of the family and retard recovery from tuberculosis.

3. Knowledge should also bring *judgment* in evaluating the relative significance of social and health factors present in the family. Thus emphasis on any one aspect of health will not become fixed, thereby dulling the nurse's sensitivity to the potential hazards of other problems. The term *contact* will call for careful consideration of the factors of time and recency in determining the relative significance of the history of exposure. Case-finding activities will thus be kept within the limits of intensive and productive effort, rather than building up a large case load in which visits must be so infrequent that little if anything is accomplished.

4. Knowledge of the philosophy and methods of education, stimulated by a sense of responsibility for the health of the community, brings results only when the nurse acquires *teaching skills* through daily practice. What a change this combination of basic public health nursing elements can produce in the results of the nurse's efforts! No longer will she be satisfied with mere numbers of medical examinations and hospitalizations, significant as they are in any control program. More enduring satisfactions will be sought in the success of the teaching methods which have stimulated the patient to *seek* examination and hospital care. What the *patient* stands to gain by making an effort to secure these services will be the motivating factor controlling his actions, rather than blind adherence to what the nurse said he should do. In short, the patient will act voluntarily because of the knowledge which the nurse had shared so effectively with him.

Gone will be the furor preceding the date of the clinic when the nurse feels compelled to canvass her district and remind the patient to be present at the

hour assigned. What happens to the patient's physical condition between examinations will become the acid test of the worth-whileness of the nursing service. Repeated examinations, at whatever intervals, never of themselves prevented or cured tuberculosis. What the patient *did* during the interval as a result of understanding the significance and method of carrying out the physician's instructions will be recognized as the true test of the ability of the physician and nurse in controlling tuberculosis. To see a diagnosis go through the stages of being active, quiescent, and apparently arrested as a result of the patient's efforts to carry out the physician's instructions, supported by the interpretation and guidance of the nurse, is a satisfaction immeasurably greater for the nurse than the examination itself.

Gone, too, will be the fixed schedule of visiting. New cases will be visited promptly and frequently in the beginning. The number of visits will be determined by the family need and ability to learn the facts about tuberculosis, so that they can assume increasing responsibility for their own welfare in the future. The clinic will be utilized to review changes in the home situation and to measure the effectiveness of the nurse's instructions—as elicited from the family—thus saving the time that might otherwise be required to visit the home for this information. When once the nurse is acquainted with the home environment, there is no valid reason for not utilizing the clinic or nurse's office as a center to which the patient may come for additional advice as needed. Not infrequently the environment of the clinic or nurse's office is far more conducive to learning than the home.

5. To display an *attitude of understanding* toward the patient who is unwilling to accept sanatorium treatment because the emotional ties to the family are so strong that separation cannot be faced; to take steps toward securing adjustments in the home whereby the patient can begin treatment in a modified hospital environment, rather than labeling him "non-coöperative" because he will not immediately accept the treatment recommended; this is public health nursing of a high order. Such procedure is evidence of the effect which a knowledge of the psychology of human behavior can have on nursing method. The nurse who does the best she can under whatever handicaps the home may present, and acquaints the family with the limitations thus imposed on the curing process may do more to change the attitude of the patient toward hospitalization than the one who merely insists on compliance without doing whatever can be done for the patient in the home in the meantime.

The patient who refuses to return for examination because the clinic personnel disregarded his comfort and feelings in the physical arrangement and general management of the clinic should be regarded as a veritable godsend to the service. One such refusal should be a sufficient stimulus to the nurse to analyze, appraise, and improve methods and attitudes until the professional personnel realize that the service exists for the patient and not the reverse.

Changing an attitude involves visualizing oneself in the place of the patient and viewing the situation from as many angles as possible in order to determine the causative factors which stand in the way of the desired action. An efficient record system, modern x-ray equipment, and other diagnostic tools are essential in a tuberculosis clinic. However, in and of themselves they remain tools designed for the convenience of the physician and nurse, unless those responsible for their use convey to the patient the feeling that the personnel and equipment are there to serve him.

Rarely are patients impressed by or even aware of the cost of equipment or

the statistical analysis of the clinic attendance. Equally rare are patients who fail to respond favorably to an atmosphere of friendliness prevailing throughout the clinic session. *"Holding"* a patient to regular examinations over an extended period of time is a matter of practical psychology, and not elaborate equipment or exceptional knowledge of the disease. The individual with tuberculosis is none the less a personality.

6. The public health nurse will reap the finest fruits of her efforts in the control of tuberculosis *if this same attitude of friendly understanding is extended to all the other community agencies* engaged in the same field. Conflicting viewpoints are more readily resolved when the nurse tries to view the situation from the position of the other agency. Inadequate income, variations in medical diagnosis and treatment, lack of adequate hospital facilities, and similar perplexities may at times stand in the way of rehabilitation of the family. Nothing is to be gained by criticizing other agencies for delayed action or variation of viewpoint.

If, on the other hand, judgment is suspended until the nurse has analyzed the situation from the other agency's point of view, her attitude is likely to undergo a change. And her sense of responsibility toward the community will enable her to recognize that a compromise solution is preferable to no action. A critical analysis of her own viewpoint may place some of the responsibility for inaction on the doorstep of the nurse. No matter how limited the community facilities for diagnosis, treatment, and economic rehabilitation, the nurse can share her knowledge of the principles of personal hygiene in tuberculosis control when her teaching skills are reinforced with an imagination that makes adaptation to the most limited resources possible.

7. Finally, public health nursing is not a charity, even though it is being financed increasingly out of tax funds. More than ever the community is entitled to know how these funds are being expended. How, other than by *records*, is this accounting to be rendered? Is a periodic report of cases, visits, time spent in the office, clinics and conferences attended, and number of miles travelled, sufficient justification from the standpoint of the community to support the service? Obviously it is not. A statistical summary of nursing activities should be accompanied by an interpretation of the figures in terms of health service, so that each citizen can see clearly the contribution made by the nurse in the control of tuberculosis and in other health fields.

Of greater significance to the nurse and the community is the progress made in professional growth as disclosed by records which adequately portray the nature of the nursing service rendered. Knowledge, skills, and attitudes assume paramount significance when the nurse can analyze each visit in terms of health information shared, services rendered, and results attained. When thus appraised, quality and not quantity becomes the goal of accomplishment. New knowledge will be sought when results are unduly delayed. New methods will be tried out as a means of establishing the family on a basis of independent action in safeguarding their own health as well as that of the community. Attitudes will undergo salutary changes when an objective analysis and appraisal of the records place failure on the shoulders of the nurse. Satisfactions will come, not in large numbers of visits, but in the increasingly small number required to bring about enlightened action by the family. The nurse will find in the records the specific evidence of her contribution to the control of tuberculosis.

Fifty years have seen changes in public health nursing and tuberculosis

control methods so remarkable that it might seem as though present-day concepts of nursing practice were entirely of recent origin. But when analysis is made of the basic tools, they are found to be the same instruments in use from the beginning. Knowledge, a sense of responsibility, judgment, teaching skills, attitudes, imagination, joint community endeavor, an accounting of stewardship, and professional growth: all these have influenced the contribution of the nurse in tuberculosis throughout a half century. Time has but served to give them greater prominence in determining the place of the nurse in public service. To the nurse of today is thrown the gauntlet of developing skills in the use of these tools so that her influence will be felt as never before in this field of human service.

Presented before the N.O.P.H.N. General Session on Communicable Disease, Biennial Convention, Kansas City, Missouri, April 28, 1938. This is the seventh in a series of articles on various aspects of tuberculosis control.

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[1] National Tuberculosis Association, 50 West 50 Street, New York, N. Y. Correspondence, August 10, 1937.

[2] Whitney, Jessamine S. Facts and Figures about Tuberculosis. National Tuberculosis Association, February 1931, p. 51.

[3] Whitney, Jessamine S. New and Supplementary Facts and Figures about Tuberculosis. National Tuberculosis Association, June 1935.

[4] Whitney, Jessamine S. Facts and Figures about Tuberculosis. National Tuberculosis Association, June 1935, p. 41.

[5] National Tuberculosis Association. Correspondence, February 10, 1938.

[6] National Tuberculosis Association. Correspondence, February 10, 1938.

PRINCIPLES OF SOUND PUBLICITY

A VERY INTERESTING talk on publicity was made by Mr. J. Erle Grinnell at the 1938 meeting of the American Library Association in Kansas City, Missouri. Many of the points emphasized in the discussion apply to public health nursing organizations. Mr. Grinnell outlined seven publicity principles:

1. Publicity should be continuous. No apathetic periods should be allowed. Day in and day out, week after week, in busy seasons and in slack ones, an ever-widening circle of people should be reached by information concerning the library. There may well be periods of intensified effort, rapids as it were in the stream of information, but there should be no stagnant places.

2. Publicity should be honest. Covering up weaknesses and playing up strong points may be the methods of business but they are not what is expected of institutions serving unselfishly the good of all the people.

3. Publicity should be inclusive. One of the first important tasks of the aroused librarian is to make a thorough study of his library to see in how many ways it can serve the public and to summarize all of the facts about library operation that should interest citizens on all levels. Then he can begin to plan a program of interpretation that will be inclusive.

4. Publicity should be understandable.

5. Publicity should be dignified but aggressive. To be thoroughly successful, it must have the aggressiveness of industry without using methods that are dubious.

6. Publicity should reach everyone in the community. No principle is more important than this. If interpretation is to reach everyone in the community, it must take recourse to every discoverable agency.

—"Where to Start." *Bulletin of the American Library Association,* August 1938.

Computing the Cost of Student Affiliations

A new method of computing the cost to a public health nursing agency of a student affiliation is described here

EVER SINCE the cost-of-visit study made by the National Organization for Public Health Nursing in 1929-1931,* public health nursing agencies have been questioning the recommended method of computing the costs of affiliations for undergraduate and graduate students. According to the suggestion of the Service Evaluation Committee of the N.O.P.H.N. (now known as the Committee on Cost Analyses) made in 1932, the replacement cost for student visits was calculated as one-half the salary cost of visits made by the regular staff nurses. No deductions were made from the salaries of the director or supervisors for time spent in supervision.

In 1935 a subcommittee of the Education Committee which was studying all problems of student affiliation was asked to work out, with representatives of the Service Evaluation Committee, a new formula for determining student costs. A study of methods of cost computation was started in 1936 and continued in 1937 among those agencies offering student affiliations. Finally, after working over the reports from about 35 agencies, a new formula for computing the cost of student work has been evolved and recommended by the Subcommittee on Student Affiliation to the Committee on Cost Analyses. The Committee on Cost Analyses has given its approval to the formula for a year's trial, and the Metropolitan Life Insurance Company and the John Hancock Mutual Life Insurance Company plan to incorporate the formula in the new cost-of-visit schedule in 1939.

The N.O.P.H.N. will be glad to answer questions regarding the use of the formula.

FORMULA FOR COMPUTING COST OF STUDENT AFFILIATION

(Graduate and undergraduate)

Gross association expense — Staff salaries = Operating overhead expense

Operating overhead expense ÷ Staff and student years = Operating overhead expense per staff and student year

Operating overhead expense per staff and student year × Number of student years = Gross cost of students

Net staff salaries ÷ Number of staff visits = Salary cost per staff visit

Number of student visits × Salary cost per staff visit = Gross student salary value

Gross student salary value — Gross cost of students = Net student gain charged or loss deducted

EXPLANATION OF FORMULA

It may be assumed that the operating overhead expense of an agency should be divided equally over the entire field staff, including students. To determine the operating overhead expense, subtract staff salaries (including that proportion of a general or special supervisor's salary that represents her time in the field as a staff nurse) from the gross expense of the association. There should also be deducted from the gross expenditures of the association any direct payment for

* National Organization for Public Health Nursing. Principles and Practices in Public Health Nursing Including Cost Analysis. The Macmillan Company, New York, 1932.

special activities such as doctors' fees, material relief, et cetera. The remaining charges such as supervision, clerical expense, rent, transportation, supplies, office expense, and sundries, are prorated equally to each staff and student year.

To determine the number of staff and student years, count each nurse who has been on duty for the normal number of working days per year for the agency, without adjustment for vacation or the usual absence because of illness. Long absences that require a substitute should be adjusted by deducting the absence of the regular nurse and adding the time of the substitute. When the nurse is on duty less than the entire year, her working time is computed on the ratio of possible days on duty to the normal number of working days per year for the agency.

Example:

The normal working time of a certain agency is 250 days per year. A nurse is appointed in the middle of the year. Her possible number of working days would be one half of 250, or 125 days (even though she may be absent a day or two because of illness). Therefore, her working time would be counted as one-half nurse year.

The number of student years is computed by dividing the total number of possible student days on duty with the agency during the year by the normal number of working days per nurse for the agency.

Example:

Three student groups a year, consisting of 4 students each, plan to be on duty 8 weeks or 40 days (5-day week). This will give a total of 480 potential student days per year (including absence) or 1.92 student years, on the basis of 250 working days for the agency.

Having determined the operating overhead expense and the number of staff and student-nurse years, the operating overhead expense per nurse is then obtained by dividing the total operating overhead expense by the number of staff and student-nurse years.

The gross operating cost of the students is determined by multiplying the operating overhead expense per nurse year by the number of student years.

Students contribute a value to the agency when they make visits alone, because if they did not make such visits it would be necessary for the agency to employ a regular nurse or substitute to make them. To determine the gross salary value of students, the number of student visits made alone during the year should be multiplied by the salary cost per staff visit. The latter is obtained by dividing the net staff salaries, (total staff salaries excluding the salary cost of nonvisiting activities) by the total number of staff visits. Since this is the salary cost of staff visits to the agency it may be assumed that each visit made by the student has a like value.

Multiplying the number of student visits by the salary cost per staff visit indicates the gross student salary value. The gross cost of students should be subtracted from the gross student salary value to determine the net student gain or loss. If the gross operating cost of students exceeds the indicated gross student salary value, then the agency will have sustained a loss; if it is less, the agency has gained. Student *gain* should be added to, and student *loss* should be subtracted from, the total expense of the agency before computing the cost per visit. Both staff and student visits are used in computing the average cost per visit.

(Agencies may wish to carry this formula one step further and divide the net student gain or loss by the actual number of students to determine a gain or loss per student. This in turn may be used as the basis of financing the student program.)

It is admitted that this formula is not an absolute evaluation of the net value of students to an organization. It contains certain arbitrary assumptions

which, it is believed, tend to counterbalance each other. Charging all non-salary expense on a per nurse-year basis seems fair for such items as educational supervision, rent, and miscellaneous expense. However, it may be questioned as to whether it is equitable to charge direct administrative cost, transportation, and nursing supplies against the gross student salary value, because it may be argued that these expenses would have been incurred if a staff nurse had made the visit.

On the other hand, there are four major factors which tend to offset what appears to be an overcharge against the salary value of student visits:

1. The total number of visits for the year may not be increased even though the agency takes on students. If this is true, the student visits would have no monetary value from a cost standpoint.
2. There is a tendency in the direction of making more visits to certain types of cases, in order to give experience to students, than would be made if the case were carried by the regular staff.
3. There is the question of the quality of a student visit; it may be argued that from a practical standpoint the student visit would not have a monetary value equal to the staff salary cost per visit.
4. The nursing overhead per staff nurse may include a disproportionate share of the cost of student education.

Although admitting that these difficulties exist in the present formula, it is the consensus that other methods of computing the student value are more difficult and would include other arbitrary assumptions or elaborate time studies. Probably the use of this formula will suggest to the agencies certain changes or improvements in it, and for that reason the N.O.P.H.N. will welcome criticisms and suggestions.

WINIFRED L. FITZPATRICK, *Chairman*
Committee on Cost Analyses
National Organization for
Public Health Nursing

THE AMERICAN JOURNAL OF NURSING FOR DECEMBER

The Patient with Pneumonia ..... J. H. Means, M.D.

The Acutely Ill Cardiac Patient ..... Abe Ravin, M.D., and Rose Steed Ravin, M.D.

Nursing Care of the Acutely Ill Cardiac Patient ..... Martha Jayne, R.N.

Digitalis ..... Margene O. Faddis, R.N.

Nurses in Administrative and Teaching Positions in Hospitals

Extra Curricular Activities ..... Edna Peterson, R.N.

Fun with Block Printing ..... Katharine B. Orr, O.T.R.
A how-to-do-it article just in time for your own or your patient's Christmas cards.

Study of Community Resources ..... Sylvia Perkins, R.N.
A comprehensive analysis of community resources set up as a program for study by staff nurses or other groups. Includes a fine bibliography.

A Staff Uses Opportunities for Growth

By WINIFRED KELLOGG, R.N.

Each organization should develop its own plan for staff education based upon its own needs. Many educational opportunities are utilized in the program described here

MANY RESOURCES may be utilized for an effective educational program in a public health nursing agency. In places where university courses are available on a part-time basis the agency may encourage the nurses to take these courses as a fundamental step in their professional preparation. An in-service staff educational program carried on within the agency promotes the continuous growth of the nurse, especially when it includes a student program which gives opportunity for teaching responsibilities on the part of the staff nurse as well as supervisor. All of these methods of education have been utilized by the Detroit Visiting Nurse Association.

COURSES TAKEN BY STAFF MEMBERS

The public health nursing course at Wayne University, Detroit, Michigan, was inaugurated for the benefit of the nurses on the staffs of the Department of Health and the Visiting Nurse Association. Since the beginning of this course in 1930, the staff education of the Association has been centered around the university program, and efforts have been directed toward completing the work for certificates and degrees. During the first year or two it was possible to permit individuals to take one course each year on association time. Since May 1933, this has not been possible because the organization has been operating on a five-day week. But nurses working forty hours a week are able to take courses on their own time.

In the year 1937, out of a total professional staff of 122 nurses, 67 completed 193 credit hours of class work in the spring semester; 53 completed 160 credit hours in the fall semester. In addition, two were on educational leave during the entire year.

A comparison of the certificates and degrees held by the staff in 1930 and in 1937 is interesting. In 1930, 5 nurses had certificates in public health nursing, and 2 had baccalaureate degrees; in 1937, 50 had certificates and 15 had degrees. Now, since so many of our nurses have completed the professional courses offered by the university, it is necessary to direct attention once more toward an educational program of our own—because continuous growth is essential to efficiency in public health nursing service. Since a nutritionist has been added to our staff, we are concentrating for the time being on that phase of the work. To this end, our nutritionist has conducted a series of lectures for the entire staff, covering the normal diet with adaptation to various economic levels and nationalities, and with modification for pregnancy and for diseased conditions. These lectures have been followed by individual and group conferences regarding specific cases.

RESULTS OF EDUCATIONAL PROGRAMS

The acquiring of credit hours, certificates, and degrees forms a tangible measure of progress. But improved performance and not the attainment of degrees is the ultimate objective of our

efforts; and we have as yet no yardstick by which to measure accurately the effectiveness of our educational pursuits. If, as Dr. Maude Watson says, "The trained worker does less footwork and the untrained worker less head work,"* we can hardly expect results of educational activities to show themselves in an increased number of visits. One nurse sees seven patients in a day and makes a real contribution in every home visited, while another sees twelve patients and does nothing but splash a little water around and put a few checks on a record. Conversely, a nurse's visit load may be low because she fails to organize her work, wastes time in travel, and is grossly inefficient, while another nurse moves quickly, plans and organizes well, carries a large volume of work, and does an excellent job.

It takes more time to teach the 18-year-old sister in the home to care for the new baby and the mother than simply to give the care; but the nurse who does the former may save the organization two or three visits because the sister can carry on, and moreover the girl has acquired knowledge and skill which will be useful to her throughout life. More time is required to teach a mother how to dress the baby's cord in terms which really teach cleanliness in the care of all open wounds than simply to put the dressing on; but the mother who learns this technique may save her children from painful infection later on. To teach isolation and nursing care on a scarlet fever case requires much more time and skill than just giving the care; but the family whose members learn the value of isolation will be instrumental in the prevention of spread of infection in the future. Visits to physicians' offices and interviews with social workers are time-consuming; but they are conducive to improved working relationships, the reduction of ineffective home calls, and the ultimate solution of the problems which are making it impossible for families to acquire health and independence. The actual care which a nurse gives is temporary and limited in its results, but the change she effects in attitudes, habits and knowledge is immeasurable in scope and application.

Such changes are occurring every day in every one of our busy districts where there is ample opportunity for a practical application of all the theory learned in the classroom and in study. Those who are closely associated with the actual work in the district are perhaps in the strongest position to evaluate the effectiveness of the educational program. We have much to learn and will never be completely satisfied, because our objectives change with time. Moreover in many cases other organizations reap the fruits of our efforts since we have a fairly large turnover in staff. But we can say with conviction that every year large numbers of our staff are able to do what they have never done before. And that, according to one definition, is what education means.*

PLAN FOR TEACHING STUDENTS

The number of students and new staff nurses who have gone through our teaching center in the last seven years is shown in the table on page 715.

So large and diversified a student body presents many problems in the administration of a visiting nurse program. Because of the variation in length of the student period of different groups, it has not been possible to control satisfactorily the number of students in the field at one time. The problems involved in manipulating a heavy case load so as to give satisfactory service to the patients and educational experience to the students are many.

*Watson, Maude. Unpublished lecture on mental hygiene, Wayne University, Detroit, Michigan.

*Palmer, Herbert George. Life of Alice Freeman Palmer. Houghton, Mifflin Company, New York, 1924.

STUDENTS AND STAFF NURSES INTRODUCED THROUGH TEACHING CENTER, 1931-1937

By classification of student and length of period	Total	Year						
		1937	1936	1935	1934	1933	1932	1931
Total students	393	90	94	68	69	34	25	13
University of Michigan 7 weeks	92	34	28	4	3	7	11	5
Wayne University 4-8 weeks	180	30	39	37	43	17	11	3
Herman Kiefer Hospital 3 weeks*	9	1	3	5				
New staff members 8 weeks**	112	25	24	22	23	10	3	5

*Postgraduate students in communicable disease nursing. No university credit received.
**Credit given at Wayne University.

STAFF BECOME FIELD TEACHERS

When the public health nursing course was established at Wayne University, the number of students coming to the Visiting Nurse Association for experience increased rapidly. It was not possible to carry on the program in one center without jeopardizing the nursing service, and the practice of using various districts as subteaching centers, with staff nurses as field teachers, was inaugurated. The field teachers were senior nurses who were selected on the basis of personality, quality of field work, and educational background. In the present program our assistant supervisors and two or three senior staff nurses are doing most of the field teaching. Under the direction of the substation supervisor they are responsible for helping new students become oriented to the substation and the district, demonstrating procedures in the homes of the patients or arranging for such demonstrations to be given by other staff nurses, checking and analyzing records, selecting and assigning cases, discussing problems, and making home supervisory visits. Class work for the entire student group is given by the educational director and assistants at teaching center.

These field teaching responsibilities have been a real challenge and an opportunity to the senior nurse and much of the success of the program has been dependent upon her. Because the problems confronting her are new and difficult she is most anxious for help. Supervisors in the subteaching centers and the educational director are called upon to assist her in meeting situations. An article entitled "A Student Program Motivates Staff Education," which appeared in PUBLIC HEALTH NURSING, has been most useful in introducing new field teachers.* Meetings have been held for the purpose of developing our teaching personnel and evolving plans and policies regarding the work.

In 1936 we reviewed our policies and procedures in the various services and the related teaching. We studied our reports and reorganized our ideas in regard to certain of our policies. We then directed our attention to analyzing the field teachers' evaluation reports on their students' work. These discussions helped to clarify varying conceptions of the relative importance of certain factors, to place emphasis upon the broader objectives in the teaching of public health nursing, and to relegate to a place of lesser concern the strict adherence to organization methods and routines. We were assisted in these projects by the professor of public health nursing of Wayne University.

An interesting series of discussions on interviewing was held in 1937, with the

*Reid, Margaret. "A Student Program Motivates Staff Education." PUBLIC HEALTH NURSING, January 1935.

assistant professor of public health nursing of Wayne University conducting them and helping to direct our thinking.

AIMS OF STUDENT EXPERIENCE

The following brief outline will give some conception of the objectives and content of the course.

The purpose of the student experience is to give the student an opportunity:

1. To apply the theoretical concepts learned in public health nursing courses at the university.

2. To understand through professional contact with physicians, social workers, and others interested in the solution of family problems, how a private health agency fits into an organized community plan, and how it differs from an official agency.

3. To experience the satisfaction which accompanies the actual giving of nursing care in the home, and to understand the value of such service in securing the rapport which is essential to successful health teaching.

4. To adapt nursing principles and procedures learned in hospital schools of nursing to home situations with safety and comfort for the patient, and a minimum expenditure of time and energy on the part of the nurse.

5. To apply the policies and procedures of the organization, evaluate her own performance in the work, and formulate some conception of her potentialities for success in public health nursing.

STUDENT PROGRAM

1. Interviews with educational director.
   a. Introductory—Discussion of student's background, plans for future, and objectives in taking field work.
   b. Progress—Content and number of interviews depend upon student's needs and wishes.
   c. Final—Discussion of student's work and aptitudes, and her suggestions for improving the field-work program.
2. Classes (Lecture, demonstration, and discussion methods used.)
   a. Introductory class—Educational director.
      Purposes:
      (1) To discuss history of organization, development of program, territory covered, service rendered and sources of support.
      (2) To explain the aims and objectives of student program.
      (3) To assign bags and explain the use of the manual of the organization.
   b. Human relationships—Mental hygiene consultant.
      Purpose:
      (1) To discuss nurse's approach to patients, families, physicians, and others.
   c. Morbidity service.
      (1) Noncommunicable disease service—Educational director.
         Purposes:
         (a) To explain policies governing service, including public health nurse's responsibility to other agencies—such as department of health, insurance companies, and other social and health agencies.
         (b) To demonstrate techniques, improvisation of equipment, organization of materials, adaptation to homes, et cetera.
         (c) To discuss teaching in the home and suggest a reading list on this subject.
         (d) To study a case history showing the use of record forms and application of policies.
      (2) Communicable disease service—Educational director
         Purposes: Same as described under noncommunicable disease.
      (3) Physical therapy and occupational therapy—Supervisor of physical therapy department.
         Purpose:
         (a) To explain the service and discuss the contribution which physical therapy and occupational therapy make to the public health field.
   d. Maternity service
      (1) Postpartum and newborn care—Maternity supervisor.
         Purposes: Same as described under morbidity service.
      (2) Antepartum care—Maternity supervisor.
         Purposes: Same as described under morbidity service.
      (3) Nutrition in relation to pregnancy—

Nutrition consultant.
Purposes: Same as described under morbidity service.

(4) Mental hygiene as related to pregnancy—Mental hygiene consultant.
Purpose:
(a) To discuss the emotional connotations of pregnancy.

(5) Delivery service—Maternity supervisor.
Purposes: Same as described under morbidity service.

e. Organization administration—Executive director
Purpose:
(1) To discuss the administration of the work of the visiting nurse association, explaining the function of the board of directors, and emphasizing relationship between the board and staff.

f. Interagency relationships—Educational director or assistant.
Purposes:
(1) To discuss briefly and generally the social and health agencies of the city, explaining in greater detail the work of the department of health, department of public welfare, county medical society, and community nursing bureau.
(2) To explain organization policies regarding use of available resources.
(3) To study case history showing use of agencies and of record forms.

g. District management—Educational director or assistant.
Purposes:
(1) To discuss methods and importance of learning the district.
(2) To explain policies and regulations governing case and district management.

h. Evaluation of work—Educational director.
Purpose:
(1) To discuss standards of performance and the place of the public health nurse in the general field of public health.

i. Case discussion—Educational director or assistant.
Purpose:
(1) To give each student an opportunity to present a family selected by her because of the problems involved, the accomplishments, or the educational value to the student group.

3. Substation and district orientation—Field teacher.
a. Conferences (daily, or as necessary).
Purposes:
(1) To explain substation set-up and routine.
(2) To discuss the district—geography, resources, travel and lunchroom facilities, and other factors of interest.
(3) To discuss cases, records, and problems.

b. Field demonstration.
In conjunction with classes. Student to observe all types of cases.

c. Field practice.
Following field demonstration and class work in a particular service. An attempt is made to give this experience as early as possible during the student period.

d. Field supervision.
Number of field supervisory visits varies with student's needs and the requirements of her cases. The total number is never less than six.

4. Reading and study.
a. The Visiting Nurse Association manual—assignments are made in relation to classes.
b. The history of the Visiting Nurse Association.
c. Suggested reading in relation to student's needs and the requirements of her cases.

Our student program is of definite value in the development of our supervisory staff. It keeps us aware of our deficiencies and needs, and makes us anxious to improve. It stimulates us to effect a change within ourselves; to satisfy our desire for greater efficiency. In the words of one of our supervisors, "a teaching program contributes a great deal to the analytical study of what supervision should be."

Some patients unfortunately seem to believe that all their ills will be cured by the purchase of a pair of glasses, which can be worn to advantage in a coat pocket, a lady's purse, or a desk drawer.

—*Sight Saving Review*

The Nurse and Industrial Hygiene

By J. J. BLOOMFIELD

The industrial nurse who is familiar with the processes, materials, and health hazards in her own plant often recognizes the relation between work environment and illness

Part III—*Industrial Epidemiology*

IF WE EXAMINE the literature on industrial hygiene, we are at once confronted with the fact that the methods employed in the study of the effect of industrial health hazards differ but little from those used in investigations of other phases of public health. This is not strange, since in the study of industrial diseases it is essential, as in communicable disease investigations, to determine the etiology, pathology, symptomatology, and the application of measures to prevent or control the disease.

The term *industrial epidemiology** as used here refers to the methods used for the investigation of diseases occurring in industry or among industrial workers and the subsequent determination of methods of prevention or control of such diseases.

THREE TYPES OF HAZARDS

Prior to discussing the various problems confronting the public health worker in industrial hygiene it may be well to define the present conception of industrial health hazards. There are several classifications of health hazards in industry, and the one employed here is but one of several versions. Industrial health hazards may be divided into three types: chemical, biological, and physical.

Chemical hazards

Under chemical hazards we have an important group of poisons, of which there are a great number and variety. The substances coming within this classification may be subdivided according to their physical characteristics, namely, whether they are in the solid, liquid, fume, vapor, or gaseous state.

Among the solids, dusts are of signal importance in view of the large number of persons exposed to dusts and also because such exposure has been associated with serious damage to the human system. Dusts of a siliceous nature may produce damage to the respiratory system, while dusts of the heavy metals group (lead, mercury, et cetera) may cause systemic poisoning.

Many chemicals of a poisonous nature are constantly being used in liquid form in industrial processes. A few, like tetraethyl lead, may be absorbed through the skin, producing toxic symptoms in a comparatively brief period of time. Others, such as acids and caustic alkalies, may produce burns, while certain dyes and dye intermediates may produce dermatitis. The list of chemicals which have been known to produce injury is very extensive.

The toxic fumes of industrial significance are those arising from the oxidation of vapors from metals heated to

* A discussion of the meaning of the term *epidemiology* will be found in an article by the author, "Engineering Aspects of Problems in Industrial Epidemiology," *Industrial Medicine*, July 1938.

high temperatures. The most common of these fumes which have been found to cause poisoning are lead oxides, arsenic oxides, cadmium oxides, et cetera.

Many chemicals volatile at ordinary room temperatures are being used extensively in industry in the form of solvents and lacquers. They constitute an important group of poisons and are characterized by their low density and volatility. Among some of the common industrial vapors of a toxic nature are such substances as benzol, carbon disulphide, carbon tetrachloride, trichloroethylene, and the various alcohols.

The gas hazards of industry are also of exceeding significance, and the fatalities from gas poisoning still constitute a major problem in industry. Gases occur as raw materials, as products, and as agents of manufacture. The inhalation of many gases foreign to pure air may be said to be almost universal. Among such gases common to every day industrial life are carbon monoxide, sulphur dioxide, hydrogen sulphide, hydrogen cyanide, ammonia, and the gases employed for refrigerating purposes, such as methyl and ethyl chloride. A knowledge of the physiology of respiration is essential in the study of the effects of toxic gases on the human system. From the standpoint of respiration, gases may be classified as asphyxiants, irritants, volatile drugs, and drug-like substances.

Biological hazards

Biological health hazards include the infections, such as anthrax, tuberculosis, typhoid fever, pneumonia, and other respiratory diseases.

Physical hazards

The physical health hazards are extremely important in industry, since in this category are the accidents caused by machinery and other environmental conditions; and excessive humidity, heat and cold, defective illumination, repeated motion, shock, and abnormal atmospheric pressures.

STUDIES OF HEALTH HAZARDS

It is impossible in this limited discussion to delve into the occurrence, toxicity, symptoms, treatment, and prevention of these various types of health hazards. The results of a few investigations of the health of workers exposed to hazardous conditions will be discussed, and attention will be called to the importance of these various health hazards in industry.

One of the duties of an industrial nurse is to become thoroughly acquainted with these injurious substances. She should be familiar with the processes, materials, and occupations in her plant, as well as the toxicity of and symptomatology caused by the hazardous materials used. With this knowledge she is often in an excellent position to recognize a causal relationship between the workroom environment and illness coming to her attention in the medical dispensary. Such early recognition is of immense value in the preventive program, in which the nurse is able to perform her most signal function.

One of the important procedures in the search for major factors in the causation of disease suspected to be of occupational origin is a detailed study of the environmental conditions associated with employment. Such a survey is not only useful in determining the origin of a disease; it also serves to indicate the extent of the hazard and quite often the measures which may be employed for control.

EXISTING CONDITIONS REVEALED

One of the first steps in environmental studies is a preliminary investigation of existing conditions in the plant or industry under consideration.* Such an in-

*The technique employed in such studies differs but little from the general public health principles with reference to the study of other health conditions. With the aid of certain forms it is possible to obtain basic data of value in the subsequent studies which are more of a quantitative nature. Space does not allow a complete discussion of preliminary surveys, but references are given at the end of this article.

vestigation shows the extent to which certain facilities are furnished the workers with reference to accident prevention, first aid, medical and nursing services, engineering control of occupational diseases, and the matter of keeping records of accidents and illness. It also indicates the specific occupational exposure to various health hazards, whether of a chemical, biological, or physical nature, and gives an idea of the control measures now in practice for each hazard. In addition, data on general sanitation of the plant are recorded. Such information is indispensable in a program for the control of hazards.

Once the important health hazards have been located by means of the preliminary survey, the next step in the program is the *quantitative* evaluation of the working environment in its relation to the health of the worker. One or two examples of such studies follow.

WORKERS IN DUSTY TRADES

The health of workers in dusty trades has received considerable attention on the part of industrial hygienists and others concerned with the various phases of this problem. This is due to the fact that a large number of industrial workers are exposed to many harmful dusts, and also because it is now well established that exposure to certain kinds of dust has increased the mortality rate from respiratory diseases.

Realizing the importance of this problem, the United States Public Health Service, in coöperation with the Bureau of Mines, began its first study of the health of workers in dusty trades in 1914, in the mines at Joplin, Missouri. Later, in 1923, the Public Health Service inaugurated a series of dust studies which were all conducted in the same manner, in order to permit as detailed a comparison as possible between the different investigations.

These methods of study may be divided into six parts, as follows:

1. Examination to determine the general physical condition of the workers under observation
2. Special physical examination to determine the prevalence of specific diseases of the respiratory system and the lung pathology resulting from exposure to the particular dust hazard
3. Record of the nature and severity of the disabling illnesses
4. Analysis and detailed study of the occupational environment
5. Occupational mortality statistics relating to the specific dust
6. Autopsies

The chief value of these studies lies in the fact that each represents careful and detailed observation of a fairly large group of persons whose working environment was accurately determined, especially with reference to the nature and quantity of dust exposure.

DUSTS PRODUCING LUNG FIBROSIS

The first six intensive investigations carried out by the Service dealt with the health of workers exposed to dusts in a cement plant, in the granite-cutting industry, in anthracite and bituminous coal mining, in a silverware-polishing plant, in cotton-cloth manufacturing, and in municipal street sweeping. Later, briefer studies were conducted in certain slate, granite, marble, and talc quarries. More recently rather extensive studies of the health of anthracite coal miners, asbestos workers, and persons employed in the ceramic industry were completed.

The first six dust studies conducted by the Public Health Service showed that the workers in the granite-cutting plants who were exposed to the highest dust concentrations suffered from an excess of pulmonary tuberculosis after 15 years or more of exposure, and developed silicosis after 2 to 10 years of exposure. In the group exposed to a lesser amount of dust, silicosis developed only after prolonged exposure, with no excess of tuberculosis.

It was found that a close relationship existed between the degree of dust ex-

posure and the extent and severity of the pulmonary damage. Anthracite coal miners experienced dyspnea and other signs of pneumoconiosis and revealed a high rate of respiratory sickness; in addition, an excessive mortality from influenza-pneumonia and possibly tuberculosis was found. Bituminous coal miners experienced a generalized fibrosis of the lungs and an excess mortality from influenza and pneumonia. Cement workers showed some signs of early pneumoconiosis with an excess of diseases of the upper respiratory tract. On the other hand, workers in the cotton-cloth and silverware manufacturing plants and municipal street-sweepers showed no excessive respiratory conditions and other illnesses when compared with the general industrial population.

ANTHRACITE COAL MINERS

The study made among anthracite coal miners involved the examination of 2711 men employed in three representative mines, while 135 disabled ex-miners, who were hospitalized for observation, were also studied. The amount and nature of the dust to which the men were exposed, as well as other environmental factors, were studied. No cases of anthraco-silicosis were found in the control group composed of hard-coal mining employees whose dust exposure averaged less than 5 million particles per cubic foot of air. The prevalence of anthraco-silicosis among the entire group of employees was found to be about 23 percent. Among all except rock workers, less than 2 percent of the men developed anthraco-silicosis when the duration of employment was less than 15 years, regardless of the amount of dust in the air.

SAFE LIMITS OF DUST EXPOSURE

As a result of this study it was possible to suggest tentative safe limits of dust exposure. For example, an exposure to less than 50 million dust particles per cubic foot of air would produce a negligible number of cases of anthraco-silicosis when the quartz content of the dust was less than 5 percent. In the haulageways, where the silica content of the dust was about 13 percent, a safe limit appeared to be 10 to 15 million particles per cubic foot, while the limit of toleration for rock workers was set at 5 to 10 million particles per cubic foot. The most encouraging findings in all of these studies were those concerning the control of the dust hazard. Engineering studies indicated, in the case of anthracite miners, that methods were now employed in the industry which controlled the dust within the safe limits specified.

Recently, the Public Health Service has conducted further studies on the dust problem. In coöperation with the newly established industrial hygiene units in various state health departments, investigations have been made of the asbestosis hazard, and the dust hazard in the ceramic industry and in certain mines involving an exposure to feldspar, mica, and similar minerals. These studies serve a dual purpose. In addition to obtaining information on dusts hitherto not investigated, they afford an opportunity for training new personnel in state health departments.

DUSTS HAVING SYSTEMIC EFFECT

The previous discussion of the dust problem has been confined to those dusts which produce fibrosis of the lungs. However, there are dusts in industry that have a systemic effect upon the human body. Chief among such dusts are those of the heavy metals group—notably lead, mercury, et cetera. The Public Health Service has investigated lead, radium, and more recently, mercury. A brief discussion of one of these will indicate the importance of these metals and their compounds in industry.

A study of conditions affecting the health of workers employed in the

hatters' fur-cutting industry was begun in 1935. In one of the early stages in the treatment of the pelts (carroting) a mercury preparation is applied. Measurable quantities of mercury leave the fur as vapor and on dust particles at every succeeding stage in the manufacturing process. Hand labor is required at almost every stage. And because many of the manufacturing processes are carried on in the same workroom, a large proportion of the workers are exposed to mercury vapor and fur dust.

At the time the study was conducted there were in all 36 plants in the United States engaged in the preparation of hatters' fur. Information obtained from these plants revealed that the industry employed approximately 2000 persons. Since it was not feasible to examine every worker in the industry, it was necessary to make a selection of plants. Such a sampling procedure could be used, provided certain information was available from each individual plant. Accordingly, a preliminary engineering survey was made in each of the 36 plants. It consisted of collecting data on industrial welfare facilities available to the workers, the general sanitation of the plant, and the processes and occupations involved in the preparation of hatters' fur. Information was obtained on facilities for conducting physical examinations and the degree of coöperation to be expected from employers and employees in the conduct of the study. These factors influenced the selection of the plants for study. In this manner it was possible to choose five plants which represented both modern and old practice, and good, fair, or poor working conditions as judged by visual inspection. In addition, this preliminary survey served to give a fairly good concept of the entire industry.

Further preliminary steps in this study—prior to making actual measurements of the working environment—consisted of making sanitary and occupational surveys of the various workrooms in the five plants. Such preliminary surveys serve as a guide in the more detailed studies which follow. The sanitary survey, for example, lists the various facilities accessible to the worker in the working environment, while the occupational survey permits one to determine the nature of the work and the particular hazards associated with each occupation.

CHRONIC MERCURIALISM FOUND

The medical studies showed that approximately 8 percent of all employees could be diagnosed as having chronic mercurialism. The symptoms on which greatest weight was laid in making the diagnosis were fine intention tremor, exaggerated forms of psychic irritability, gingivitis, other types of oral pathology, coppery discoloration of the mucous membranes of the mouth and throat, and certain characteristic neurological and vasomotor disturbances. The incidence of mercurialism was greatest in the occupations in which exposure to mercury vapor and mercury-impregnated dust was greatest. This makes it seem reasonable to suppose that a reduction of mercury concentration by the introduction of engineering control methods would result in a reduction of the health hazard.

Engineering and chemical studies showed that these workers were exposed to from .6 to 7.3 milligrams of mercury per 10 cubic meters of air, and that by the methods of segregation and local exhaust ventilation the occupational exposure to mercury could be reduced to less than 2 milligrams per 10 cubic meters. In other words, this study showed that it was possible to control the hazard in this industry by methods already employed in some of the plants producing hatters' fur.

The above examples illustrate the methods used in the study of chemical health hazards in industry. One more

study, which is typical of a so-called biological health hazard, will be cited.

STUDIES OF ILLNESS

In the preceding article in this series, attention was called to the importance of illness among workers and the necessity for determining its extent. A number of establishments have realized the value of keeping adequate sickness records. But studies have shown that many of these records are not uniform and that frequently essential information is lacking.

A knowledge of absenteeism with respect to frequency, duration, and cause, in each numerically important occupational group in an industry or a factory, reveals the type of action which should be taken to obtain a maximum reduction in the amount of time lost from work on account of disability. In the absence of such information it is impossible to estimate the relative importance of sickness problems in need of attention.

For example, the incidence of pneumonia may be abnormally high in some occupational group, but this situation may not be revealed when the number of cases occurring in the group is not related to the population exposed. When such sickness rates are available for specific diseases by occupation, the effect on health of certain environmental conditions may be measured and evaluated. In the collection of sickness records in industry, the progressive nurse can play an important part.

PNEUMONIA IN STEEL INDUSTRY

The study of the pneumonia problem in the steel industry, which is briefly discussed here, has been selected for two reasons: (1) because it illustrates clearly the role of the public health worker in investigating problems in industrial epidemiology and (2) because it emphasizes the need and value of the statistical approach to studies of industrial health hazards. The United States Public Health Service has been receiving reports from industrial sick-benefit organizations since 1922. During the period 1922-1928 it was found that the pneumonia case rate in the steel industry was nearly 70 percent above the rate in public utilities and approximately 50 percent higher than the rate for a group of other reporting industries. Among industrial workers generally one may expect an average pneumonia rate of 2.5 to 3.0 cases per year per 1000 men; for the steel industry the average was 4.4 cases per 1000 male members of the reporting sick-benefit organizations.

This result is the more striking on account of the low morbidity rates for nearly all of the major causes of illness among steel workers—which is suggestive of a favorable position of the men in the industry from a physical standpoint. Ruling out such factors as the pneumonia mortality in iron and steel manufacturing centers, seasonal variation in frequency of the disease, influenza epidemics, economic status, age of the men and their nationality, and extent of addiction to alcoholic stimulants, it was still found that an excessive amount of pneumonia existed in certain departments of the steel plant under study.

This statistical analysis of the pneumonia problem among steel workers clearly indicated that the nature of the work and the working environment probably played an important role in the causation of this disease. The pneumonia rates found in this industry constituted the basis for a detailed study of working conditions which might predispose to pneumonia or to certain other respiratory diseases. The environmental study showed, among other things, that the disease was associated with exposure to heat hazards when subjection to wide changes in temperature was involved; also with outdoor exposure to inclement weather, and with indoor exposure to

humid, drafty conditions and wet clothing. Sudden cooling or chilling of the body was indicated as an important predisposing factor. One of the interesting findings of this study was the concentration of the excess cases in a relatively few occupations. In the case of the blast-furnace department, high pneumonia rates were limited to 10 of the 68 occupations in this department. This finding not only simplified the environmental studies, but also made a study of the control measures less difficult.

As a result of this investigation several remedial measures suggested themselves:

1. Mechanical devices are needed to reduce the heat hazard in occupations involving exposure to radiant energy.

2. Extension of the mechanization of processes involving heat hazards would reduce the frequency and intensity of the workers' exposure.

3. Adequate provision is needed for change houses for employees exposed to the conditions which appear to predispose to respiratory diseases; and the use of such houses should be compulsory. Men perspiring freely after a bout of heavy work in front of the open hearth furnaces were observed changing clothes while standing in a direct draft. Others went home without changing their clothes even though they had become wet from perspiration.

4. Shelters seem to be needed in stormy weather for those who work out of doors.

5. Reduction of hours of work through the stagger system or some other plan and the prohibition of double-shift duty in pneumonia-hazardous occupations, especially during the winter months, would doubtless prevent the development of a number of cases of the disease.

6. In connection with the development of education in industrial safety in the steel industry, the health education of employees appears to be an important weapon in combatting pneumonia. Employees should be instructed regarding the danger of sudden chilling due to comparative inactivity following exposure to high temperatures, and the importance of suitable protective clothing.

7. A visiting nurse service to instruct the patient and help arrange for adequate medical and nursing care during the incipient stages of illness should reduce mortality and shorten the duration of nonfatal cases. Such a service may function as a part of the employee sick-benefit organization, or the local public health nursing organization may be utilized.

8. The effectiveness of measures taken to diminish the incidence of pneumonia should be gauged by means of sickness and mortality rates, covering preferably a five-year period. These rates should be so tabulated as to reveal the effect of influenza epidemics during the period under review.

Many other examples of studies of the health of workers in industry could be cited, but those presented here will illustrate the methods involved in the practice of industrial hygiene. The role played by the industrial nurse may be inferred from this discussion and will be made more obvious in the next article.

NOTE: This is the third of a series of articles by Mr. Bloomfield on various aspects of industrial hygiene. The fourth article, on the control of industrial health hazards, will appear in the January issue.

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(To be continued)

THE NURSE AND ABSENTEEISM

MY EXPERIENCE has proved that the services of capable nurses to investigate every employee absence are productive of greater all-round beneficial results than any other means of ascertaining the true cause of absence. Moreover, the interpretations which a tactful diplomatic member of the nursing profession can place upon her observations are not only beneficial as to the specific cause of absence but in numerous instances will also prove very informative as to the home life of the absentee and frequently shed new light or confirm previous opinion with respect to the probable cause of the employee's condition, et cetera. Dr. M. N. Newquist, in "Medical Service in Industry and Workmen's Compensation Laws," states: "While the purpose of home visitation is to render any needed assistance, its concomitant effect in reducing absenteeism due to unnecessary personal reasons is highly desirable."

—From "Sickness in Industry," by R. B. Robson, *Industrial Medicine*, August 1938.

NOTES *from the* NATIONAL ORGANIZATION FOR PUBLIC HEALTH NURSING

Ella Phillips Crandall

ELLA PHILLIPS CRANDALL, the first executive secretary of the National Organization for Public Health Nursing, died in New York City on October 24, after a brief illness with pneumonia. She died as she had lived, thoughtful of others in the instructions left for her family and friends, modestly unaware of the great contribution she had made to nursing and to society and of the bereavement which her death would mean to her personal and professional friends.

Miss Crandall was one of the pioneer leaders in public health nursing in the years of its early growth in this country and was one of the founders of the N.O.P.H.N. In "Twenty-five Years Ago" (PUBLIC HEALTH NURSING, March 1937), Mary Gardner describes her as "the driving force of the group" which drew up the plans for the new national organization—a group of which Lillian D. Wald was chairman.

As the first director of the Organization Miss Crandall traveled far and wide—carrying the responsibility of the office while she was on field trips—interpreting the hopes and plans for public health nursing to nurses and lay people, and in her own words, "bringing the experience of one agency to bear upon the problem of another, for there were no generally accepted standards" in those days.*

Some of the high lights of these years are described in an interview with Miss Crandall last year during the Silver Jubilee of the N.O.P.H.N. when Eleanor Mumford visited her in the office of the Payne Fund, of which she was executive secretary from 1925 till her death. Miss Mumford writes: "I found her in her office in the tower of the old Metropolitan Life Insurance Company . . . She has a serene and dignified yet at the same time friendly manner, and a delightful sense of humor."

Younger members of the Organization who did not know Miss Crandall became acquainted with her through the story of this interview, and we are happy that it could be published as a tribute to her while she was living. A complete obituary is published in the December number of *The American Journal of Nursing*.

Mary Beard, who with Miss Crandall was one of the founders of the N.O.P.H.N., writes of her:

"A long time ago before there was any National Organization for Public Health Nursing, when I was working in the Laboratory of Surgical Pathology at the College of Physicians and Surgeons, someone came and said, 'There is a Miss Crandall here to see you.' I had never heard of her, never seen her then. When she began to speak I felt at once those qualities of hers which she could not hide even if she had wanted to. There were earnestness and sincerity in her voice and in her expression—even about her figure and the way she used her hands. She had sought me out amongst my paraffin sections and my card catalogues of pathological conditions and she did not leave me until she had convinced me that there was so great a need for active public health nurses in the field that I must consider seriously the

*Mumford, Eleanor W. "A Chat with the First Director of the N.O.P.H.N." PUBLIC HEALTH NURSING, April 1937.

special 'call' she brought me. To how many, many other nurses Ella Crandall would be making that appeal I was to know well during the next few years!

"She had a romantic, almost a medieval quality about her that lit up and glorified all her work. She had unlimited vitality. Work and life were one to her. Those of us who knew her well would have little trouble to see her, in our mind's eye, dressed in armor, riding a white horse and tilting at dragons—and how the dragons went down before her lance. No nurse was too obscure and unimportant for Ella Crandall to give her her full attention and just as much of her time as she would give to the most distinguished visitor. Can't you see her at the nursing conventions carrying on conference after conference with all of us? And to the board member who came to her she gave the same undivided attention, the same enthusiasm, the same generous willingness to listen and advise.

"It is not too much to say that there would never have been a National Organization for Public Health Nursing—or not in 1912 at least—without her. She had such faith in the value of it. She saw its functions, the extent of its influence, its creative power, long before others believed in it. 'Now faith is the substance of things hoped for—the evidence of things unseen,' and Ella Crandall swept us along with her until we, too, felt the substance a tangible thing in our hands, until the evidence of her faith could be read as we ran.

"To go out of life as she has done is beautiful; to live as she lived is lovely, for she had that valiant quality that can move mountains and make us all believe that we can too."

WITH THE STAFF

Dorothy Deming went to Mt. Kisco, N. Y., on November 15 to attend the meeting of the Executive Committee of the District Nursing Association of Northern Westchester County. November 18 and 19 she spent in Detroit, Mich., participating in the meetings of the institute for administrators which Wayne University planned with the N.O.P.H.N.'s help. She presided at the Friday afternoon session of the institute which was given over to a discussion of the preparation of staff. She took part in the Saturday morning meeting on personnel practices, discussing the question, "What are present employment practices in the selection of staff and working conditions?"

Dorothy Deming and Ella McNeil attended a special conference on health education called by the National Education Association, the United States Public Health Service, the American Social Hygiene Association, and the National Health Council, in New York City on November 8 and 9. About thirty national agencies interested in school health were represented. It was decided that a national committee on coöperation in school health education should be organized.

Purcelle Peck attended the joint meeting of the industrial nurses' clubs of New York, New Jersey, and Philadelphia, Pa., and the New England Industrial Nurses' Association in New York, on October 29.

Evelyn Davis went to New Britain, Conn., on November 15 to conduct an institute for board members and volunteers given under the auspices of the Maternity and Child Health Committee of the Visiting Nurse Association.

American Public Health Association

October 25-28, 1938

FOR THE SECOND TIME this year the beautiful Municipal Auditorium in Kansas City, Missouri, opened its doors to public health workers, gathered on this occasion for the Sixty-Seventh Annual Meeting of the American Public Health Association, October 25-28. Over two hundred public health nurses were among the health workers registered. And as usual, several other national organizations took the opportunity to meet, hold committee conferences, and join with the appropriate sections of the American Public Health Association.

On the Saturday and Sunday preceding the formal program the National Organization for Public Health Nursing called meetings of the Collegiate Council on Public Health Nursing Education (formerly known as the Council of Course Directors), and of its Education Committee. Both meetings were well attended. Problems of the curriculum and relationships to the Association of Collegiate Schools of Nursing were discussed, and the Education Committee approved three new courses in public health nursing to be added to the list of the 19 already approved. They were the courses at Duquesne University, Pittsburgh, Pa.; St. Louis University, St. Louis, Mo.; and New York University, New York, N. Y.

On October 24 the state supervising nurses held a closed conference which they enjoyed so much that they voted to form a permanent organization and planned to meet again next year. In the afternoon the course directors and representatives of national and federal agencies joined the state supervising nurses for a group discussion of divisional relationships in the state health departments and the development of crippled children's programs.

Except for two meetings of its own, the Public Health Nursing Section of the A.P.H.A. joined with other groups this year to discuss problems of mutual interest. One of the best meetings was that held with the health officers on October 27. The "Administrative Problems in a Delivery Nursing Service" were discussed by Dr. Earl P. Bowerman and Dr. W. Frank Walker. Grace Ross read a very thoughtful paper on the topic, "Is the Health Officer Fulfilling His Responsibilities in Relation to the Nursing Program?" and Dr. Felix J. Underwood of Mississippi presented "A Critical View of Nurses and Nursing Programs." "Administrative Procedures That Interfere with Effective Public Health Nursing" were reviewed by Dr. Mayhew Derryberry. All of the papers provoked helpful discussion and members of the audience expressed a desire to repeat the joint session next year.

Other joint sessions included meetings with the Child Hygiene Section and the Industrial Hygiene Section of the A.P.H.A. and with the American School Health Association.

The chief topic for discussion at the joint session with the Industrial Hygiene Section was the great need for health service in small industrial plants and the important place which the well qualified public health nurse may fill in meeting the need. Speakers were Dr. John G. Prendergast, medical director, Chrysler Corporation, Detroit, Mich.; Dr. Carey P. McCord, director, Bureau of Industrial Hygiene, Detroit Department of Health; LaVona Babb, R.N., Quaker Oats Company, St. Joseph, Mo.; and Joanna M. Johnson, R.N., supervisor, Industrial Nursing Division, Employers Mutuals, Wausau, Wisc.

The subject of greatest moment to us all, however, which occupied the

thoughts and discussions of practically every group including the general sessions, was the National Health Program. The subject was handled succinctly by Dr. Thomas Parran, Surgeon General of the United States Public Health Service, in the opening general session on October 25 and his statements were followed by the Presidential Address of Dr. Abel Wolman. The developing opportunities which lie in the proposals made in Washington at the National Health Conference in July were in the minds of all—so much so that the special session on October 26 was given over to the "Public Health Aspects of Medical Care." This was discussed by Mr. A. J. Altmeyer, chairman of the Social Security Board in Washington, Dr. Irvin Abell, President of the American Medical Association, Dr. C.-E. A. Winslow of Yale School of Medicine, Dr. Martha M. Eliot of the U. S. Children's Bureau, Dr. Edwin H. Schorer, the Health Officer of Kansas City, and Fred K. Hoehler of the American Public Welfare Association.

This interest of the week crystallized in the resolution presented by the Governing Council at the banquet on Thursday evening. A part of this resolution is quoted:

> We pledge the American Public Health Association to use all its professional resources, and such influence as it has earned through sixty-eight years of development and leadership in public health to aid governmental agencies in accomplishing these statesmanlike health objectives.
>
> Furthermore, we offer our coöperation to the governmental agencies which may be charged with the proposed expansion of health services in the United States, and we stand ready to collaborate with other professional and scientific organizations having similar principles and objectives, to the end that at the earliest possible date in every area under the jurisdiction of the United States the whole population may have the benefit of the best that public health service can bring them.
>
> BE IT RESOLVED that the foregoing declaration expresses the formal and considered opinion of the American Public Health Association and that it shall be published in the *Journal*.
>
> BE IT FURTHER RESOLVED that the Executive Board is hereby instructed to appoint a representative committee of seven Fellows of the Association to coöperate during the coming year with the Interdepartmental Committee of the United States Government, with the American Medical Association, the American Dental Association, the National Organization for Public Health Nursing, the Conference of State and Territorial Health Officers, and with other agencies, to the end that these principles may be translated into effective action.

Altogether the meetings impressed this attendant, at least, as forward-looking, vigorous, and intelligent. We seem to have emerged from the depression years with greater strength and higher standards than ever before. Indeed, one is inclined to agree that out of adversity comes victory.

Mention should also be made of the very well planned scientific exhibits, the motion pictures in the exhibit hall which were enjoyed by all, and the entertainment which our Missouri friends offered us in the shape of an informal tea on the opening day and singing and dancing following the banquet.

The new officers of the A.P.H.A. are:

1938-1939

President—Abel Wolman, Dr.Eng.
President-Elect—Edward S. Godfrey, Jr., M.D.
First Vice-President—A. Grant Fleming. M.D.
Second Vice-President—Leonidas A. Almazan, M.D.
Third Vice-President—Edwin H. Schorer, M.D.
Treasurer—Louis I. Dublin, Ph.D.
Executive Secretary—Reginald M. Atwater, M.D., Dr.P.H.
Chairman of the Executive Board—John A. Farrell, M.D.

The officers of the Public Health Nursing Section are:

Chairman—Marguerite A. Wales
Vice-Chairman—Marion W. Sheahan
Secretary—Ruth Houlton

The nurse members of the Governing Council are:

Dorothy Deming, 1941
Naomi Deutsch, 1941
Pearl McIver, 1939
The officers of the Public Health Nursing Section

DOROTHY DEMING, R.N.

THE NURSE and INDUSTRIAL HEALTH

NATIONAL SAFETY CONGRESS

THE National Safety Council celebrated its twenty-fifth birthday in 1938 with a Silver Jubilee Safety Congress and Exposition held at the Stevens Hotel in Chicago, Illinois, October 10-14.

This Congress broke all previous records for attendance and for the number of exhibit booths. Meetings of the various sections were in general larger than ever before. Certainly this was true of the two sessions and the luncheon meeting on industrial nursing which were held in coöperation with the National Organization for Public Health Nursing.

Some two hundred people attended each of these sessions. Among them were industrial nurses and other public health nurses, industrial physicians, personnel managers, safety engineers, employers, and nurse educators of state health departments.

The program for these sessions may be found in the October 1938 number of PUBLIC HEALTH NURSING (page 583) and some of the many excellent papers read will appear in future issues of this magazine.

Nurses who presented papers at the meetings were Mrs. Blanche Lloyd Francis of the Carpenter Steel Company, Reading, Pennsylvania; Mrs. Sidney Hook, Abbott Laboratories, North Chicago; Doris Craig, Koppers Coal Company, Mt. Hope, West Virginia; Mrs. Hazel H. Leedke, Shell Petroleum Corporation, East Chicago; Mrs. Christian Seabrook, Metropolitan Life Insurance Company, Chicago; and Frances E. Silbaugh, Oscar Mayer and Company, Madison, Wisconsin.

Contributions were also made to the program by distinguished leaders in other fields. Dr. Edward C. Holmblad, consultant in industrial medicine and surgery, Chicago, illustrated with small models his very interesting presentation of "Problems in the First Aid Treatment of Fractures." Chester S. Johnson, of the Quaker Oats Company, Cedar Rapids, Iowa, spoke for the plant manager concerning public health nursing. Dr. M. N. Newquist, assistant director, American College of Surgeons, defined the place and functions of the nurse in industry and her relationship to the other human elements of the industrial machine. He stressed especially the importance of medical direction for the nurse. He believes this can and should be secured for every plant—even the smallest—from some physician in the community.

The final session at which Joanna M. Johnson, chairman of the Industrial Nursing Section of the N.O.P.H.N., presided consisted of a most interesting and informal open forum for the discussion of various phases of industrial nursing. Among participants in the forum—beside the nurses and others mentioned above—were Dr. C. O. Sappington, consulting industrial hygienist of Chicago, and Mr. F. W. Braun, vice-president and chief engineer of Employers Mutuals, Wausau, Wisconsin.

Everyone present apparently considered that the nurse has an important place in industry, but opinions as to just what that place is and how it shall be filled differed sufficiently to make discussion lively—though never acrimonious.

Some of those who took part have agreed that their remarks may be set forth in the industrial section pages of the magazine. Look for discussions of the following questions in this and succeed-

ing issues, and send in your own opinions.

1. How can the nurse aid the safety department without taking on the functions belonging to the safety engineer? (See "The Nurse's Responsibility for Safety," below.)
2. Who should supervise the industrial nurse?
3. How can medical direction be secured for the nurse in a plant too small to make possible a salary to a medical director?
4. Should the industrial nurse give nursing service to the highly paid executives of the organization?
5. How may the industrial nurse receive prompt information concerning employees who are absent because of illness?

RUTH HOULTON, R.N.

THE NURSE'S RESPONSIBILITY FOR SAFETY

SEVERAL points of view were expressed at the National Safety Congress in Chicago, Illinois, regarding the extent to which the industrial nurse is responsible for the safety of employees. Two of the discussants—a nurse and a safety engineer—have summarized here the remarks they made at the meeting. Following their comments Mr. W. Graham Cole, director of safety in the Welfare Division of the Metropolitan Life Insurance Company, has presented a brief statement concerning the relationship of the industrial nurse to management in regard to the problem of safety. Mr. Cole is a member of the Executive Committee of the Industrial Nursing Section of the National Organization for Public Health Nursing.

We hope that our readers will write us their opinions on this important subject. New points of view will be published in this section or in the column "Our Readers Say . . ."

SIX SHORT RINGS FOR THE NURSE

It has been suggested that every industrial nurse should make it her daily routine to familiarize herself with the various departments in her plant. I have been following this plan ever since the day I took over my duties as nurse in our concern. While making these daily visits through the plant, I was constantly reminded that if an accident should occur during my absence from the medical department, serious circumstances might arise.

The matter was discussed with my employer and I was given a bell signal of six short rings. This arrangement has been very satisfactory for all concerned.

Daily inspection of the factory should not be a humdrum routine, merely to see the wheels go round, but a careful study of each and every department. An industrial nurse should have a keen eye for the worker who disregards the safety rules. She should maintain an active coöperation with the foremen of the various groups.

Recognizing danger before it occurs is her obligation. It is my belief that we should be well informed regarding the operation of the different machines, and constantly on the alert to release the mangled arm or leg by instant pressure on the release switch.

An industrial nurse should preach safety, practice safety, and live safety in her plant. This does not mean the overstepping of a safety engineer's or foreman's duty. On the contrary, it means continuous coöperation with these individuals, in the mutual accomplishment of a now recognized and vitally important industrial problem.

MARGARET JOHNSON, R.N.
Industrial Nurse,
Wilson Jones Company,
Chicago, Illinois

NO ONE INDIVIDUAL CAN DO IT ALL

The question arises in my mind: Is not this nurse taking on the duties of the safety engineer? Of course the organization set-up differs widely in different plants, due largely to the difference in size and in character of operations. Where a physician is in constant attendance there seems to be no administrative problem since the nurse takes instructions from him.

In small plants where a full-time physician is not employed there is apparently an expansion of functions far beyond anything that would seem to be justified by the usual preparation for industrial nursing.

The papers read at this meeting disclose an imposing list of qualifications, and state desired abilities far beyond the standard of any hospital or college requirement for nurses, and certainly beyond the hope of an industrial concern looking for a nurse.

What are the aims of industrial nurses? Do they wish to expand the numbers who can be employed? Or does each hope for herself that she may be a supervisor and direct such activities as safety, employment, engineering studies of dangerous toxic materials, employee and public relations, et cetera—as has been brought out at this meeting?

I understand how in a very small plant the nurse can be of assistance to an executive in these many matters—but only as an assistant and not as a directing head. At least not if she is to remain a nurse. Is not her normal function as a nurse paramount to routine duties incident to safe-operation methods, good housekeeping, or the maintenance of machines and equipment? In addition, can she not be of great help in cementing employer-employee relations by cheerful coöperation and a kindly attitude towards those who come to her for dressings or whom she may visit in the home?

Will not industrial nurses as a group profit most by being excellent nurses first and helpers of busy executives second (where the job does not require them to be fully occupied as nurses)? Or is it true that a large number are required to be a composite of all the qualities enumerated in the discussions at this meeting? If this is the case, they deserve a new deal, for it is my opinion that no single individual could possibly be so adept.

H. N. WELCH
Safety Engineer,
General Electric Company,
Bloomfield, New Jersey

MANAGEMENT IS RESPONSIBLE FOR SAFETY

The proper treatment of injured and sick employees, under competent medical supervision, should be considered the basic responsibility of the nurse in industry. Her training in the field of preventive medicine has, however, made her sensitive to causes of mortality and morbidity, and has therefore equipped her to assist in industrial accident-prevention programs. The extent and methods of rendering this assistance must be consistent with proven safety principles and with the regular organization procedure of the industry in which she is located.

Experience indicates that the responsibility for the prevention of industrial accidents rests directly upon management and supervision and that industrial safety must be considered as an integral phase of operating procedure. When this responsibility is in any way transferred to the safety engineer, the industrial nurse, or any other employee not directly responsible for plant operations, the entire fiber of the safety program is weakened.

The competent safety engineer serves as a consultant to operating officials, aiding them in obtaining essential information, and planning their preventive activities. The industrial nurse is in close touch with the visual indications of the accident problem. She sees the results of accidents from the point of view of the first-aid room where injuries are treated. From her conversations with employees requiring her technical services she can be of invaluable assistance to the safety engineer and through him to the management and supervisory staff by obtaining and presenting information relating to the causes of accidents.

To equip the industrial nurse to render this service, she should be given opportunities to become generally familiar with plant conditions and operating procedures by occasional trips through the property. She should not be expected, however, to make official inspections or undertake any activity which could be construed as relieving the supervisory organization of its direct responsibility to prevent accidents.

W. GRAHAM COLE
Director of Safety, Welfare Division, Metropolitan Life Insurance Company

MEETING OF INDUSTRIAL NURSES' CLUBS

OVER two hundred industrial nurses gathered at the Hotel Pennsylvania in New York City on October 29 for a joint conference of the New Jersey, New York, and Philadelphia Industrial Nurses' Clubs and the New England Industrial Nurses' Association.

Marion G. Dowling, industrial nurse of the Lowe Paper Company, Ridgefield, New Jersey, greeted the groups in behalf of the New York club, of which she is the president. Catherine Dempsey of the Simplex Wire and Cable Company, Cambridge, Massachusetts, who is president of the New England Association, presided. A round table on industrial nursing problems was conducted under the leadership of Grace McVay of the Pyrene Manufacturing Company, Newark, New Jersey, who is chairman of the New Jersey Industrial Nurses' Club.

The following five-minute papers were read, opening lively discussions on each of the subjects:

Qualifications and Experience Necessary for the Industrial Nurse—Marion G. Dowling, Lowe Paper Company, Ridgefield, New Jersey.

Standing Orders—Mrs. Ella MacDonald, Farr Alpaca Company, Holyoke, Massachusetts.

Legal Aspects of Industrial Nursing—Mrs. Helen Hynson, Surpass Leather Company, Philadelphia, Pennsylvania.

Preëmployment Examinations—Gertrude Muller, Lambert Chemical Company, Jersey City, New Jersey.

Community Relationships—Winifred Hardiman, Terry Steam Turbine Company, Hartford, Connecticut.

There was active participation on the part of those present, who represented various types of industrial organizations ranging all the way from banks, newspapers, and department stores to the heavy industries.

Several of the discussions from the meeting will be published in succeeding issues of the magazine. Greetings from the National Organization for Public Health Nursing were presented by Purcelle Peck, editor of PUBLIC HEALTH NURSING. The groups decided to hold another joint meeting next year.

A dinner was held in the evening at which Marion Dowling presided and Mrs. Elizabeth Dyott, industrial nurse of the Insurance Company of North America, was toastmistress. Dr. Allen Stockdale of the National Association of Manufacturers was the speaker of the evening.

Industrial Nurse: See also pages 682, 718, 725, 738, 743.



PREPARING THE HANDICAPPED CHILD TO LIVE

By MAY E. BRYNE

There was a child went forth every day,
And the first object he look'd upon, that object he became,
And that object became part of him for the day or a certain part of the day,
Or for many years, or stretching cycle of years.

The early lilacs became part of this child,
And grass, and white and red morning-glories, and white and red clover, and the song of the phoebe-bird.

. . . . . .

And all the changes of city and country wherever he went.

. . . . . .

The family usages, the language, the company, the furniture, the yearning and swelling heart,
Affection that will not be gainsay'd, the sense of what is real, the thought if after all it should prove unreal,
The doubts of daytime and the doubts of nighttime, the curious, whether and how,

. . . . . .

These became part of that child who went forth every day, and who now goes, and will always go forth every day.

THIS QUOTATION from *Leaves of Grass* by Walt Whitman expresses the social philosophy which underlies the education of all children. Every human being is what he is because of the things he has done and seen, because of the people who have come into his life. All have left their imprint on his personality. Such a concept of education includes all the influences of the home, the school, and the community. Therefore, it is the responsibility of parents and teachers working in coöperation to provide growing children with those experiences which will enable them to live in a community with tolerance and understanding—those experiences which will assist them in accepting their responsibilities in such a way that society may move forward toward a better world.

If this philosophy is accepted, how does it affect the education of handicapped children? Every handicapped child has a right, insofar as his handicap will permit, to all those experiences which will enable him to make the greatest possible contribution to human progress. His desire is to stand shoulder to shoulder with the healthy and the strong, doing his part, having some share in the world's work. His ability to take a real place in the world does not rest wholly with himself. It is dependent also upon the attitude of those who are not handicapped. There is no better way to build desirable attitudes and understandings than to start as early in life as possible.

NORMAL AND HANDICAPPED TOGETHER

This would mean that the ideal school set-up would be in a regular school building where the normal and the handicapped might have daily contacts. Here they would work and play together, learning each other's worth. Day

by day it would be possible to weave into the being of each child a tolerance and respect for the one who differs from himself. These impressions gained in the formative period of life would tend to remain as long as life itself. Perhaps the adult world would then be a happier place for the handicapped. The conditions which have been described are more ideal than practical as they cannot be attained in their entirety.

In a public school system, supported as it is by taxation, one can not hope to provide for the specific needs of handicapped children in every school. The cost would be prohibitive. The best that can be done is to approximate a life situation as nearly as possible, ever striving to reach the ideal. For this reason, handicapped children in Minneapolis are provided for, insofar as it is feasible, in the regular school.

All braille and sight-conservation classes are located in regular school buildings at either the elementary- or high-school levels, in accordance with chronological ages and social needs. The children participate daily in the regular class situations, making their contributions with the children of better vision. With the help of the special teacher who coördinates the work and assists in every possible way and with the aid of special equipment and supplies based on their needs, these children for the most part make normal progress through school. What may be of greater importance, an opportunity is hereby afforded for both the child with normal vision and the one whose vision is impaired to observe each other's strong as well as weak points, and in addition to grasp early the idea that a physical handicap can be greatly minimized by the attitude of one's associates.

To be sure, individual differences will be apparent. But the writer's experience has been that those differences are not so dependent upon differences in physique as upon innate differences in individual children irrespective of physical condition. Many children in our sight-conservation classes excel in scholastic achievement over children with normal vision in the same class. The opposite is also true. These variations will be found in any class and in any school. Occasionally there is found the child who feels he is discriminated against because of his handicap and who longs to do the things he sees other children doing, such as riding a bicycle or driving an automobile. These are real problems and not easily solved. The child is in need of mental hygiene to help him face reality. Most of us at some time in our lives have needed to be shown that some things are not for us. To be able to face facts regarding one's self would solve many personality difficulties. A good way to dispel a feeling of inferiority is to realize that one excels in some other way. Any mental hygiene program instituted in the school must be extended to the home, because the coöperation of all who touch the life of the child is required to bring about the desired results.

EDUCATION FOR LIFE WORK

For the past two years a plan for senior high school students has been in effect whereby those pupils in the sight-conservation group who are not going on to the University may become initiated into industry. They are in school every morning. In the afternoon they work on an actual job, for which they receive industrial credit toward graduation. The type of work each undertakes is determined after a careful perusal of a case study covering mental development, individual interests, eye condition, and local industrial conditions. This is done in a conference of all who have worked with the child and in conjunction with the state rehabilitation department. A conference with the child and his parent is also arranged. Placement is made by the rehabilitation worker. One

of the teachers who is interested supervises all industrial placements at present. By this means we hope to bridge the gap between school and work.

The Minneapolis schools for the deaf and for children of lowered vitality have both been recently moved to regular elementary-school buildings where greater opportunities for contact with normal children are afforded. Thus we are grasping every opportunity to develop our practice in accordance with our philosophy.

Through conferences between the teachers in the regular schools and the instructors of the handicapped group the former have become aware of the special needs and problems of these children and have helped the handicapped and non-handicapped children to adjust to each other.

Because of the great expense of special equipment and especially trained workers necessary for corrective work, our school for crippled children (The Dowling School) is an exception. It is an isolated school in the elementary division. To offset the necessary isolation of these children every effort is made to give them as many contacts as possible with physically normal children. Scout troops have been organized for both boys and girls. A number of Girl Scouts go to regular scout camp each summer. The Girl Reserves also have an organization in the school. Both Scouts and Reserves meet during the noon hour. Contacts with other scout troops that are not handicapped are arranged as often as possible. The orchestra has done much to make Dowling children feel like real boys and girls. They go to other schools to play and give programs, while groups of normal children in return come to visit them.

When the child has completed his 8A work at Dowling School, an individual case study is made covering economic conditions of the home, the parents' plans for further education, the mental development and academic achievement of the pupil, his plan for the future, his physical disability, and the probable prognosis of his physical condition. All who have been working with the child and the high-school coördinating teacher sit in conference and after a thorough discussion of all information make a recommendation for further education and training. The home is acquainted with the result through the visiting teacher. For the most part the recommendations are acceptable to the home. It is only the occasional parent who is not in agreement with the recommendation made by the school. The children are then enrolled in either the vocational high school or a regular academic high school. A very few enter the industrial field of their choice upon completion of the eighth grade.

Speech correction and remedial reading are carried on in the regular school; the children are not required to leave their buildings to attend speech clinics as is the plan in some school systems. A part of our program in both these fields is to help the regular teacher become more conscious of these difficulties and more familiar with remedial techniques. With both types of work the parents are acquainted with what the teacher is doing so that they may coöperate through home supervision. In this way our social philosophy that all should work in unison on these more tangible difficulties becomes operative and effectual.

Provisions are also made for slow-learning pupils through special classes in elementary schools and junior high schools. At both levels every effort to arrange for participation of the child in the activities of the school is made. Even an exchange of pupils between the regular grade and the special class is made if the child can profit by such a plan. The slow-learning child goes to the regular grade for those subjects which he can carry successfully in competition with the children there; the child from the regular grade goes to the special

class for remedial help with a subject in which he has a special disability, such as reading or arithmetic. If this is handled in the right way, there is no stigma attached to attending classes in the special room. In fact, we have had children go to the principal's office and ask to be placed in the special room. At the junior high school level the children are with the special teacher for three periods a day while special programs are made out for the remainder of the day based upon the needs and abilities of the individual child. Further contacts with boys and girls of the same ages are afforded through the homeroom period.

In these ways and many others, Minneapolis is striving to have its handicapped children grow up in a world which does not set them apart but which welcomes them exactly as it welcomes other children, which offers them identical privileges and identical responsibilities.*

*White House Conference on Child Health and Protection. The Handicapped Child. The Century Company, New York, 1933, p. 3.

EDITOR'S NOTE: Two previous articles discussed the education of the handicapped child in special schools (see "Education of Handicapped Children," by Bess R. Johnson, April 1938, and "A Public School for the Crippled Child," by Mildred Meador, August 1938). In order to present different points of view on this subject, this article is published to discuss the social and psychological values of educating handicapped children in the regular schools.

SANDWICHES FOR THE LUNCH-BOX

Carrying lunches from home is an economy measure practiced by many high-school and working boys and girls. Sandwiches are usually the foundation of such lunches. If it taxes the imagination of the sandwich-maker to provide different kinds of fillings from day to day and still keep the cost within a limited food budget, perhaps a few suggestions will be welcome.

1. If different kinds of bread are used, this alone will give some variety to the lunches.

Whole-wheat—plain or raisin
Cracked wheat
Rye
White—plain or raisin
One slice of whole wheat and one slice of white

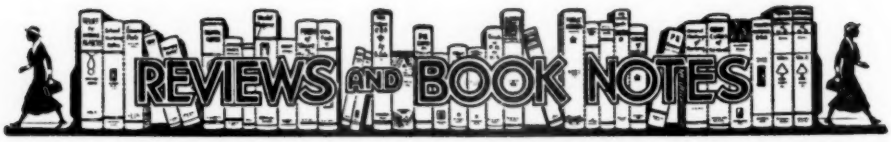
2. If homemade salad dressing is mixed with fillings when suitable, sandwiches will be less dry, and will have a "tang" that most people like.

3. If shredded cabbage, shredded yellow turnip, or grated carrot is added to sandwiches they will provide more food value, be more refreshing, and will cost very little more.

SUGGESTED FILLINGS

1. Cottage cheese with watercress
2. Cottage cheese with chopped prunes
3. Cottage cheese with jam or jelly
4. Store cheese, sliced, or cut in small pieces and mixed with salad dressing
5. Peanut butter (a perennial favorite), thinned with evaporated milk or salad dressing
6. Eggs, hard-boiled, chopped, and mixed with a little salad dressing
7. Baked beans, mashed, with a little grated onion if desired; or with chili sauce or catsup
8. Salmon, mixed with finely chopped green pepper and salad dressing
9. Chopped raisins, mixed with a small amount of salad dressing
10. Apple butter

—*Nutrition Notes*, A.I.C.P., New York, N. Y.



EDITED BY
ELLA E. McNEIL

MEMORANDA OF TOXICOLOGY

By Max Trumper, Ph.D. 304pp. P. B. Blakiston's Son and Company, Philadelphia, third edition, 1937. $2.

This compact handbook of toxicology fills a definite need for a concrete presentation of data concerning acute poisoning. The need for a conservative evaluation of much existing and frequently conflicting data is well stated by the author in his preface: "The books on toxicology range in size from compact essays, such as the present work, to the ponderous volumes of hundreds of pages, often called by a sort of irony 'Handbooks.' Much original material is found scattered through many serial publications, mostly medical, covering many years and languages. Of this material much has been discarded as untrustworthy and a considerable portion of the remainder scrutinized with caution before being utilized herein."

A truly surprising amount of information is packed into the 304 pages of this book. Part I comprises general toxicology and corrosives including inorganic and organic acids, alkalies, and certain organic substances such as creosote, phenol, and lysol. Under simple irritants, Part II, the author discusses inorganic substances such as zinc, chromium, lime, et cetera; irritants of animal or vegetable origin such as botulism and poisonous fungi; and irritant gases such as chlorine, phosgene, formaldehyde, and mustard gas. Part III, specific irritant poisons, is mostly devoted to intoxication from certain of the heavy metals and also includes iodine, bromine, and phosphorus, as well as specific irritant poisons of vegetable or animal origin. The neurotic poisons, Part IV, ranging from opium to nickel carbonyl, provide an important section. The appendix and addenda discuss bites from reptiles, insects, and rabid animals, insulin and thallium poisoning, alcoholism, drug addiction, neuropsychiatric aspects of poisoning, and first aid—to mention but a few of the topics covered.

It will be seen that *Memoranda of Toxicology* gives a well rounded presentation of more than just the essentials of toxicology. It succeeds very well in bridging the gulf between the usual compendium and a major treatise on toxicology. At the same time its compactness especially recommends it for the busy worker with restricted library facilities.

LAURENCE T. FAIRHALL
Washington, D.C.

MODERN WAYS WITH BABIES—PHYSICAL AND MENTAL DEVELOPMENT

By Elizabeth B. Hurlock, Ph.D. 347pp. J. B. Lippincott Company, Philadelphia, 1937. $2.50.

The author has presented the subject of the mental development and training of young children in a clear and intelligent manner. Although the book is written by a psychologist, there is throughout a recognition of the importance of the physical care of the baby and the need for close coöperation with a physician in the proper care of infants. A sound, scientific basis for the present-day conception of infant training is presented in nontechnical language so that it is easily understood by a person who has had no psychological training.

There is a happy combination of in-

formative material and advice on the training of children, and also on the meeting of problems which may arise. Wherever possible specific rules are given for the guidance of parents. Where definite rules are not possible a general basis for meeting specific situations is presented.

The book should be of real value to parents; fathers as well as mothers would profit by reading it. This book might be read with profit by nurses, teachers, and others who are concerned with the care and training of children in the first three years of life.

Very few adverse criticisms of this book can be made. One would like to have seen some mention of the need of physical examinations of nurse-maids, as well as emphasis upon desirable mental and emotional factors. It is unfortunate that the book ends with a recommendation to subscribe for a particular magazine.

RICHARD M. SMITH, M.D.
Boston, Massachusetts

A HEALTH PROGRAM FOR CHILDREN IN FOSTER CARE

By Child Welfare League of America, Inc. 24pp. Russell Sage Foundation Building, New York. 1938. 35c.

This suggested program, which was prepared by Dr. Florence A. Browne, recommends for children in foster care an adequate medical and nursing service which recognizes and plans for the normal as well as the ill child. The health services are to consider the child both as an individual and as an active unit in the home. The program emphasizes the value of adequate recreational facilities to develop and maintain good body mechanics and promote emotional health. It stresses the importance of a mental hygiene program integrated with every procedure of the foster care organization, and advises a competent psychological service to determine which children are able to adjust most easily to a particular home.

The program is planned for children either in foster homes or institutions. It is in line with progressive policies in the supervision of children in foster care.

ELLA LOUISE GILMORE, R.N.
Detroit, Michigan

SEX SATISFACTION AND HAPPY MARRIAGE

By Rev. Alfred Henry Tyrer. 160pp. Emerson Books, Inc., New York, 1938. $2.

This is an enthusiastic discussion of the technique of sexual intercourse, by an elderly Canadian clergyman. It is plainly and simply written, with several anatomical diagrams. It should be useful particularly to persons who want advice with a mild religious flavor. The author's discussion of such topics as impotence and frigidity is necessarily superficial, and there are many minor points which might be questioned; but all these things are relatively harmless. The book as a whole is characterized by good sense.

PAUL POPENOE, Sc.D.
Los Angeles, California

CHANGES AND TRENDS IN CHILD LABOR AND ITS CONTROL

By Homer Folks. 30pp. National Child Labor Committee, 419 Fourth Avenue, New York. Publication No. 375, June 1938. 10c.

This leaflet, a reprint of an address at the National Child Labor Committee luncheon held in connection with the 1938 National Conference of Social Work at Seattle, gives a picture of child labor conditions today that should be useful as a basis for both opinion and action in this important field. It traces the changes in public opinion in regard to employment of children and the development of child labor legislation, analyzes the available data as to the number of children employed, and points out the occupational shift of child workers during the past decade from the manufacturing to the mercantile and personal service industries. Of particular and immediate significance are the

sections on the Fair Labor Standards Act of 1938 and the present status of the Child Labor Amendment.

BEATRICE MCCONNELL
Washington, D.C.

NUTRITION OF THE INFANT AND CHILD

By Julian D. Boyd, M.D., edited by Morris Fishbein, M.D. 198pp. National Medical Book Company, Inc., New York, 1937. $3.

This book, one of a series of national medical monographs, is an earnest plea to physicians to prepare themselves to guide their patients in establishing food habits that will result in optimal nutrition. The author lays particular stress on the fact that effective therapeutic diets should be based on the normal needs of the individual, varying only enough to meet the demands of his disease. This emphasis is reinforced by a clear discussion of the requirements for various nutrients at different periods of early childhood.

It is unfortunate that in a book such as this, more stress is not placed on the need for adequate diet during pregnancy, the importance of breast feeding, and the relation between the quality of the mother's diet and the milk she produces.

The book is illustrated with excellent photographs although most of them deal with gross manifestations of nutritional deficiencies. The supplementary tables giving information about proprietary infant foods and many different types of therapeutic diets should be of great assistance to physicians. This book would not be a first choice for a nurse's reference shelves.

ELIZABETH GUILFORD
New York, New York

MENTAL HYGIENE FOR NURSES

By Elizabeth Lee Vincent, Ph.D. 260pp. W. B. Saunders Company, Philadelphia, 1938. $2.

In this book the author touches upon many subjects, any of which might require time, thought, and continued study to adequately understand the fundamental principles of mental hygiene involved. It seems fair to say that the content of this book might best serve the younger student entering upon a course in nursing education rather than the student who has had a broader scientific background. The emphasis upon positive mental health rather than upon the abnormal—which is so frequently stressed—is to be commended. This positive approach will help to increase an interest in the emotional factors involved not only in good health but in illness as well.

CORNELIA A. ERF, R.N.
Cleveland, Ohio

JURISPRUDENCE FOR NURSES

By Carl Scheffel, M.D., in collaboration with Eleanor McGarvah, R.N. 248pp. Lakeside Publishing Company, New York, second edition, 1938. $3.

In the second edition of this book, first published in 1931, the author has had the benefit of collaboration by a registered nurse who is also a member of the bar. Among the subjects discussed are the legal status of nursing, the legal obligations of nurses, contracts, wills, the nurse as a witness, criminal responsibility of nurses, and property rights. Since the book is intended as a teaching text, quiz questions based on actual cases are given at the end of each chapter. Data on state nurse-practice laws are also presented in an appendix.

As the only book on law written especially for nurses, this volume should serve a somewhat useful purpose.

JAMES A. TOBEY, Dr.P.H.
New York, New York

CHRISTMAS IN THE HOME

A pamphlet, *Christmas in the Home—A Teaching Unit on Healthful Home Living*, has been prepared for the National Tuberculosis Association by Ruth M. Strang, Associate Professor of Education, Teachers College, and Grace Reeves of the Horace Mann School of Teachers College. Copies may be secured from state tuberculosis associations.



• Two maps, "Infant Mortality in the United States, 1936," and "Maternal Mortality in the United States, 1936," have been prepared by the U. S. Children's Bureau from reports of the Bureau of the Census. These maps show the mortality rates in each state for 1936. The size of the maps is 8″ by 10½″ and they may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C.

• The American Medical Association and the National Broadcasting Company are sponsoring a series of broadcasts on the subject, "Your Health." These broadcasts will be thirty-minute dramatizations written and produced by professional radio artists, with orchestra accompaniment. They are intended to supplement the health instruction in the schools. The program is being broadcast over the Blue network of the National Broadcasting Company each Wednesday at 2 p.m., Eastern standard time. Information may be obtained from *Hygeia,* 535 North Dearborn Street, Chicago, Ill., or from your local radio station.

• Elizabeth Lawrie Smellie, Chief Superintendent of the Victorian Order of Nurses for Canada, was awarded the Mary Agnes Snively Memorial Medal by the Canadian Nurses' Association because of her great contribution to Canadian nurses and nursing. Miss Smellie received her professional education at Johns Hopkins Hospital, Baltimore, Md., and took a postgraduate course in public health nursing at Simmons College, Boston, Mass. In 1932 she was awarded a Rockefeller Foundation fellowship which permitted her to make a special study of maternal welfare in several European countries. As chairman of the Nurses' Section of the Canadian Public Health Association for three years, and as vice-chairman of the Nurses' Section of the American Public Health Association for three years, she has made a great contribution in helping to coördinate activities of the Canadian Nurses' Association with those of the official public health associations.

• The next regional conference on social hygiene will be held on February 1, 1939, at the Hotel Astor in New York City.

• Dr. N. P. Neilson, formerly president of the American Association for Health, Physical Education, and Recreation, has become executive secretary of that organization. His office will be in the NEA headquarters building in Washington, D. C.

• Mail carriers will be allowed to collect first-class mail or printed matter from the mail box of a family under quarantine for communicable disease, according to a new ruling of the Postal Laws and Regulations. Formerly no mail was collected while a home was under quarantine. The revision of the ruling was made by the Post Office Department after assurance from health authorities that mail prepared by well individuals in such homes does not constitute a hazard to postal employees or those receiving the mail.

NURSE PLACEMENT SERVICE

N·P·S CHICAGO announces the following placements that have been made in public health nursing:

Emma Sater, District Supervising Nurse, State Department of Health, Springfield, Ill.

Catherine McDermott, Public Health Nursing Supervisor, Providence District Nursing Association, Providence, R. I.

Carolyn Bowen, Public Health Nursing Supervisor, Providence District Nursing Association, Providence, R. I.

Evelyn Coleman, Generalized Supervisor, Visiting Nurse Association, Milwaukee, Wis.

Theresa Jenniges, Supervising Nurse, City Department of Health, Quincy, Ill.

Mary I. McCarthy, Educational Director, Visiting Nurse Association, Bridgeport, Conn.

Alice Rorrison, Field Supervisor (General Assistant in Public Health Nursing), University of California, Los Angeles, Calif.

Mrs. Judith Davies, Public Health Nursing Instructor, University of Wisconsin School of Nursing, Madison, Wis.

Maud Holman, Instructor in Public Health (summer 1938), George Peabody College, Nashville, Tenn.

Flora Burghdorf, Educational Supervisor, Visiting Nurse Association, Houston, Tex.

Janet Jennings, Director of Nursing, Chicago Maternity Center, Chicago, Ill.

Mary Dunlap, Public Health Nursing Instructor, University of Chicago, Chicago, Ill.

Eileen T. Walker, Instructing Supervisor, Out-Patient Department, University Hospital, Ann Arbor, Mich.

Lucille Gleaton, Community Nurse, American Red Cross, Public Health Nursing Association, Keyport, N. J.

Mrs. Blanche Crawford, Public Health Nurse, Missouri Tuberculosis Association, St. Louis, Mo.

Ellen Graf, Public Health Staff Nurse, Visiting Nurse Association, Evanston, Ill.

Gertrud Kroeger, Staff Nurse, Henry Street Visiting Nurse Association, New York, N. Y.

Sylvia Taipale, Family Health Counsellor, W. K. Kellogg Foundation, Battle Creek, Mich.

Mrs. Ina Silverthorne Long, Clinic and Follow-up Nurse, Illinois Birth Control League, Chicago, Ill.

Mrs. Thelma Cline, Clinic Nurse, Chicago College of Dental Surgery (Loyola University), Chicago, Ill.

Margaret F. Allen, Public Health Nurse for Harvey, Ill.; Chicago Tuberculosis Association, Chicago, Ill.

Frances Williams, Staff Nurse, Detroit Visiting Nurse Association, Detroit, Mich.

Jennie Blalock, Visiting Nurse, Visiting Nurse Association, Bordentown, N. J.

Marjorie Peck, School Nurse, Negaunee Public Schools, Negaunee, Mich.

Margaret McCall, School Nurse, Public Schools, Mt. Clemens, Mich.

Frances Orgain, School Nurse, Forest Park Public Schools, Forest Park, Ill.

Mrs. Jean J. McCraney, School Nurse, City Schools, Monticello, Ill.

Ruth Kragtorp, School Nurse, Public Schools, Harlan, Iowa.

Jessie Jones, School Nurse, Salida Public Schools, Salida, Colo.

Sarah Beck, School Nurse, Elementary Schools, Robinson, Ill.

Carmen Risto, Industrial Nurse, Container Corporation, Chicago, Ill.

Jane Brewer, Industrial Nurse, Wieboldt Department Store, Chicago, Ill.

Mrs. Eunice Diggle, Industrial Nurse (temporary), Continental Can Company, Chicago, Ill.

APPOINTMENTS OTHER THAN N.P.S.

Hazel M. Reed, Director, Visiting Nurse Association, Albany, N. Y.

Mary M. McGinbey, School Nurse, Hamden, Conn.

Mary A. Roberts, School Nurse, Hamden, Conn.

Theodora A. Floyd, Assistant Professor and Director of Public Health Nursing Course, University of Hawaii, Honolulu, T. H.

Mary Dunlap, Instructor in Public Health Nursing, University of Chicago, Chicago, Ill.

FOOD VALUE CHARTS

A set of black-and-white charts, size 8 x 7½ inches, has been prepared to emphasize relative values of some common foods as inexpensive sources of calcium, iron, and vitamins A, B, and C. They were developed for the use of public health nurses for answering the questions most frequently asked about foods by mothers and children in schools and clinics. The relative cost of each food can be worked out on the basis of current local prices. The charts may be secured from the Philadelphia Child Health Society, 311 South Juniper Street, Philadelphia, Pa. They are available for 25 cents for a set of five charts.

Our Readers Say . . .

THIS COLUMN is intended to serve as a forum for the expression of reader opinion. Only signed letters will be published, although the signature will not be used except with the writer's permission. The National Organization for Public Health Nursing is not responsible for opinions expressed on this page.

BEDSIDE CARE IN RURAL AREAS

I was very glad to see your editorial in the November number of the magazine on bedside nursing care for rural patients. I think it is time that we as nurses did something about this problem. If only each rural public health nurse could give a demonstration month of bedside care once a year, the farmers would soon be asking for more and would be ready to provide funds. Could the government offer to subsidize a demonstration in every state?

The Red Cross has tried itinerant nurses and many of those services have developed into permanent community programs. I believe every public health nurse ought to go out of her way to demonstrate the usefulness of this sort of help and I believe that state nursing groups ought to think out ways to meet the needs for a reasonably priced full-time graduate nursing service in rural homes.

Can't we copy the coöperative plans of other groups and keep graduate nurses busy on a salaried basis in the way in which some of the Canadian country people maintain a community physician? It does not seem to me we take enough initiative in this. Why don't we experiment more? Parent-teachers groups, Kiwanians, Rotarians, Women's Clubs, et cetera—wouldn't they back such experiments? Let's get something started!

A CONSTANT READER

FROM NEVADA

Every issue of PUBLIC HEALTH NURSING contributes something of value to each and every member of our public health nursing department. The field nurses—all nine of them—are subscribers and readers. The effectiveness of their work is enhanced by the many excellent articles dealing with maternity and child hygiene services. My own problems in supervision and program planning are being successfully met by such articles as Florence Hollis' "Intangibles of Good Supervision," and "A Program for Staff Education," which appeared in the December issue.

Sometimes it is a race to see who gets first chance at the office copy of the magazine—the doctor in charge of the state public health department or myself.

May I also say a word of praise for the new Book Notes?

CHRISTIE A. THOMPSON, R.N.
State Supervisory Nurse,
Nevada State Board of Health,
Reno, Nevada

FROM CANADA

May I tell you how much help I, as a school nurse, receive from your most useful and inspiring articles.

Hard times and the resulting lack of funds make it impossible to do as thorough work as we would like to, but we are grateful for the star which you help us to keep in sight, to which we may hitch our "school wagon."

AGNES B. BAIRD, R.N.
Winnipeg, Canada

FROM TEXAS

I want to say that each month I think the PUBLIC HEALTH NURSING magazine gets better and that I derive a great benefit from all the articles.

BEATRICE LOTT, R.N.
Advisory Nurse,
State Board of Health,
San Angelo, Texas

FROM AN INDUSTRIAL NURSE

The members of the New York Industrial Nurses' Club have asked me to tell you that they are delighted with the current issue of PUBLIC HEALTH NURSING.

We realize that industrial nursing cannot occupy the lion's share of space every month, but we shall appreciate any that you can afford us. I think this particular issue has stimulated a great deal of interest in the magazine and it has certainly caused much grateful comment!

MARION G. DOWLING, R.N.
President, Industrial Nurses' Club
New York, New York

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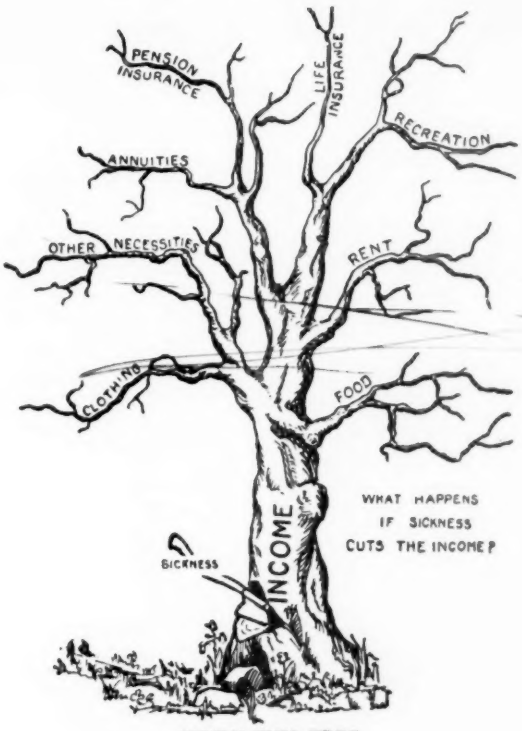
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